NOVEMBER, 1990
Vol. 36 — No. 7
$2.50

Precision SHOOTING

Dealing exclusively with the topic of extreme rifle accuracy

At the Labor Day matches at Mill Creek range, in Kansas, the Mill Creek Range formally became the Bruce Hodgdon Range, in recognition of the contributions to the accuracy game by the gentleman, and his company.

In this photo, surrounding the venerable Bruce Hodgdon are a gaggle of local shady characters (read: benchrest shooters): Chet Whitebread, Steve Kroan, Don Creach, Larry Kuse, Merlin Hubbrd, and Brian Cook.

John Gammuto photo.

PRECISION SHOOTING

PUBLISHED MONTHLY BY PRECISION SHOOTING, INC.

Editorial Offices
37 Burnham Street East Hartford, Conn. 06108
Tel. 203-643-1157 (work)

Business Offices
5735 Sherwood Forest Drive Akron, Ohio 44319
Tel. 216-882-6877 (home)

Editor — David Brennan
Assistant Editor — John Gammuto
President — Myles Hollister
Vice-President — Dr. Richard Maretzo
Treasurer — Stella Buchtel
Corp. Clerk — Allie Euber

Precision Shooting (USPS 441840) is published monthly by Precision Shooting, Inc. Rates: U.S. $20.00 a year; Canada $22.00 a year. Two years: $36.00 U.S., $40.00 Canada. All other countries $26.00 Surface Mail, $44.00 Air Mail, each year.

POST MASTER: Send all address changes to Precision Shooting, Inc., 5735 Sherwood Forest Drive, Akron, Ohio 44319.

Place of Publication — EBSCO Media, Birmingham, Alabama. Second-class postage paid at Elmira, New York and additional mailing offices.

NOTICE TO ADVERTISERS

PRECISION SHOOTING is printed by offset. Display copy is to be furnished by the advertiser. Advertising plates will be made from negatives, good black and white glossy prints or clear copy. Displays will be made to Advertiser's specifications. All normal composition will be set according to our own standards. Rate cards will be mailed to Advertisers on request. We reserve the right to reject advertising that we do not deem in the best interests of Precision Shooting.

LOADING NOTICE

The publisher, staff, and contributors to these pages respectfully advise readers that they make no representation of safety for the loads, procedures, or methods reported herein. We publish facts that were used on a given day, under a set of circumstances that are subject to dozens of variables, any one of which may cause an accident if changed or even duplicated. Please use caution at all times in the shooting sports.

BACK ISSUES

are available from: John Hollister, R.D. #2, Box 2395, Whitehall, New York 12887-9539. Inquiries by mail only, please. Make checks payable to Precision Shooting.

1-12 issues, $3.50 apiece
over 12 issues, $3.00 apiece

PS STAFF

YE OLDE EDITOR
David Brennan
37 Burnham Street
East Hartford, Conn. 06108
(work) 203-643-1157
FAX (203) 643-5872

ASSISTANT EDITOR
ADVERTISING MANAGER
John Gammuto
5685 Forest Hill Drive (#203)
Clarendon Hills, Ill. 60514
(work) 312-269-8701
FAX 312-269-8318

SUBSCRIPTION MATERIALS
Stella Buchtel
5735 Sherwood Forest Drive
Akron, Ohio 44319
216-882-6877

COLUMNISTS:

Technical Editor:
M. H. Walker
P.O. Box 111
Etonah, North Carolina 28729

Benchrest - Feature
Lt. Col. Rick Hornbeck
R.D. 2, Box 220
Pine Bush, N.Y. 12566
914-744-3978

The Great Gunsmith
Seely Masker
54 Woodshire South
Getzville, N.Y. 14068
716-689-8894

Uncharted Waters
Merrill Martin
1250 67th Street
Emeryville, California 94608
(204k) 415 652-2200

Rail Gus and Deringers
Jerry Masker
123 Radcliffe
Getzville, New York 14068

Big Bore Stuff
Buddy R. Salyer
1515 East Main St.
Morehead, Kentucky 40351
606-784-8934

Deputy Editor for Southwest
Robert Pease
P.O. Box 787
New Braunfels, Texas 78130
512-625-1342

Official Gunsmith on the San Andreas Fault
Geo. M. Fullmer
2499 Mavis Street
Oakland, California 94601
415-533-4193

Pomp and Circumstance
Peter (Rabbit) Callan
7813 River Road
Waggaman, Louisiana 70094

Official Gunsmith in Suspenders
Harold R. Broughton
Rt. 1, Box 447
Big Spring, Texas 79720
915-394-4430

High Velocity Stuff
Allie Euber
Church Street
Orwell, Vermont 05760
802-948-2621

The Bwana of Zortman
Boyd Mace
1815 Fillmore
Rock Springs, Wy. 82901
307-382-3670

The Ballistics at the O.K. Corral
Geza Nagy
436 So. 5th Avenue
Highland Park, N.J. 08904
201-572-1255

.308 is a Beautiful Number
John Bunch
5303 Jefferson, Rt. #2
Garland, Texas 75040
214-530-7136

Obscurata and Mythology
Rich Kayser
1820 5th St. South
Nampa, Idaho 83651
208-465-5409

The Swamp Fox
Kenny Jarrett
383 Brown Road
Jackson, So. Carolina 29831
803-471-3616

The Desert Rat
Richard Cundiff
905 Saratoga Way
Carson City, Nevaca 89701
702-882-9115

Single Shot Jedi knight
Warren Greatbatch
10,000 Wehrle Drive
Clarence, New York 14031
716-659-6901 (work)

Advertisers Index

Amrex Enterprises 11
Armor Metal Products 43
ASSRA.....28
B-Square Company 45
Bald Eagle Precision Machine 24, 64
Berger Bullets.....27
Broughton Rifle Barrels 3
Bruno Shooters Supply 33
Cornett, C. W. 49
Custom Products 38, 43
Davidson, A.L. 20
Douglas Barrels 28
Fowlers 14
Freeland Scope Stands, Inc. 7
Gammuto, John 14
Giamo, Vince 28
Greenawalt, Jim.....16
Hammond's Gun Shop 5
Hart & Son, R.W. 47
Hart Rifle Barrels 15
Haydon's Shooter's Supply.....41
Hildago, Tony 47
Hodgdon Powder Co. 31
Jarrett Rifles 44
Jensen's Custom Ammo 37
Jewell, Arnold.....32
JGS Precision Tool Mfg. 27
K&M Services.....40
Kelbly, Inc. 45
Krieger Barrels 6
Lewis, Jack.....48
Lilja, Dan 8
Marquart Precision Co.....17
Masker, Seely.....18
S. D. Meacham Tool & Hardware, Inc. 48
Mitchell Bullets 46
MTM Molded Products.....12
McClusky Precision Rifles 5
McGee, Mike 32
Optical Services Co. 50
Outers (Blount) 34
Pac-Nor Barreling 17
Pact PC 23
Pease, Bob 20, 45, 64
Pence Precision Barrels 9
Pend Orielle Sport Shop.....7
Prairie Dog News 27
Precision Reloading, Inc. 13
Pro-Shot Products 49
Protector Model 5, 37
Redding Reloading Equipment 18
Rorschach Precision Products 20
Rubright, Brian 46
Scott's Custom Rifles 13
S&W Gunshop, Ron Ryder 40
Schneider Bullets.....9
Schneider, Gary.....10
Shilen Rifles, Inc. 50
Shooter's Choice 64
Spencer's Custom Guns 46
Trading Post Ads 50
W. Waller & Son, Inc. 4
Welsh, Bud 37
Whitetail Design & Eng. Ltd. 9

EDITORIAL

"I have undertaken a labor, a labor out of love for the world and to comfort noble hearts: those that I hold dear, and the world to which my heart goes out. Not the common world do I mean, of those who (as I have heard) cannot bear grief and desire but to bathe in bliss. (May God then let them dwell in bliss!) Their world and manner of life my tale does not regard; its life and mine lie apart. Another world do I hold in mind, which bears together in one heart its bitter sweetness and its dear grief, its heart's delight and its pain of longing, dear life and sorrowful death, dear death and sorrowful life. In this world let me have my world, to be damned with it, or to be saved."

Gottfried von Straussburg
(author of *Tristan und Isolt*)

It is possible, dear reader, that your November issue will be a little bit late. Not only is it possible . . . it is probable. We have changed printers, and one does not change printers casually, and without incident. Things that were known and understood by a printer with over ten years of working with a particular magazine now have to be carefully explained. Nonetheless, be all this as it jolly well may, our new printer, EBSCO Media, of Birmingham, Alabama, publishes over 70 different magazines a month, and offers both trade expertise and cost economies that we could not turn away from. Next month we should be back on our original mailing schedule, which calls for us to ship the December magazine on or very close to a November 25th date. Have faith . . . it will all work out!

And our new printer is well underway with "The Best of PS, Volume II." Hopefully that will be printed somewhere around November 5th or 10th. And will be available from the same sources as was volume I shortly thereafter. As things turned out, we got about a year and a half of the magazine into volume II. Volume I ended with the inclusion of articles from the February, 1986 issue. The new issue carries us through the best articles from PS up to (approximately) June, 1987. And then, because we will have a few months of peace and quiet, and would probably get bored, with no project to drive us crazy, Precision Shooting will be publishing its very first book. Our regular, and highly regarded, columnist Boyd Mace has authored what will be somewhere in the vicinity of a 200 page book on serious, long range varmint shooting. It is no casual work of a fellow with a factory rifle, telling about shooting woodchucks at 150 yards. Those of you who read Boyd's regular articles in this publication know that he is a pretty savvy fellow in matters dealing with accuracy, using benchrest actions, and match grade barrels generally, with enough nostalgia thrown in, in the form of an occasional Sharps Borchardt or whatever, to keep it interesting. Mr. Mace is also a wildcat enthusiast, and has other colorful eccentricities (don't raise your eyebrows that way, Emma . . . we just talk about shooting here). The book will be well illustrated, with something like a hundred photos. We see the book as filling a long time need, and are delighted to be bringing into print . . . hopefully in time for Christmas gift giving.

We have managed to survive the summer . . . which is a real problem time for our modest little time. It seems that during the summer months nobody wants to write about accuracy, or such topics. Everybody is out there DOING it . . . shooting in matches, farmers fields, the OK Corral, or wherever strikes their fancy of the moment.

One cannot even get a grunt of a reply out of shooters who, in the midst of winter, will talk your ear off . . . and then write you a ten page letter summarizing what they said earlier. While summer is a delightful time for all sorts of things, from bikini watching to the study of wine coolers, in a way we're not all that sorry to see it go. The arrival of the first few cold weeks of autumn has brought about the predictable result . . . our mail box is becoming increasingly full each day. And we'll all benefit from that.

There is a phrase common among competitive runners . . . other worlds may use it also; it's merely that runners were the first to use it near me. When the race entrants were talking or speculating about the probable winner of the upcoming race, after running through all the likely contenders, someone would invariably say .. . "but maybe today it will be 'one from the ranks.' " Meaning of course that today maybe it will be some fellow who will come out of nowhere, and run the race of his life. We were personally a bit delighted when the 1990 Super Shoot had the two classes won by "one from the ranks" . . . Norm Dixon won the 10½ pound class, and Paul Mitchell took 13½ pound honors. In the two gun aggregate it was back to the old pros . . . Allie Euber, Lowell Frei, and Larry Englebrecht. But no matter . . . we need the old pros . . . and we occasionally need "one from the ranks" to pull off a major match win. That's what keeps us all going, seemingly.

We encourage the input of material from our readers. With an admittedly modest $600.00 a month budget for our writers, we can't exactly compete with *Forbes* magazine for top writers. But many of our amateur writers have been pleased to find a PS check for a hundred bucks or so in their mailbox. As a regular reader, you know our interests . . . benchrest, equipment, big-bore, small-bore, lead bullet, single shot, precision reloading. We encourage your input . . . after all, it is YOUR magazine.

BROUGHTON RIFLE BARRELS

Harolds' Custom Gun Shop Inc.

S.S. Match Grade barrels in
22 - 6 - 25 - 7mm - 30 Cal

We Specialize in Top Accuracy
Bench Rest, Live Varmint and Hunting Rifles
as well as aluminum pillar bedding
in wood and synthetic stocks.

Harold & Bruce Broughton
Benchrest Gunsmiths

Rt. 1 Box 447
Big Spring, Tex 79720
915-394-4430

SPENT CARTRIDGES AND IDENTIFYING ACCURACY PROBLEMS

by

John J. Gammuto

Have you ever heard someone say, "My bolt handle is very difficult to open after firing a round. I almost have to beat it open with a hammer. Don't think I'm overcharging the cartridge!?! Could it be something else?" Questions like this would become unnecessary if more shooters possessed something more than a rudimentary understanding of the principles of reloading.

My first response to a question like this is, "Tell me about your cases. What do they look like?" A spent cartridge can be your best source of information. It mirrors problems and often draws the experienced reloader to certain conclusions. It is my contention that 50% of accuracy-related problems can be detected by careful examination of a fired round.

Trying to help a fellow shooter on the phone without the benefit of some physical evidence is a difficult proposition at best, but doesn't prevent most of us from trying. The caller is often frustrated, confused, and eager for a quick remedy. Unfortunately, a solution isn't always that apparent. You could spend hours on the phone suggesting various things to try and be off the mark with every one of them. Generally it's more of a communication problem than anything else. Sometimes it takes several minutes to identify which part of the cartridge the caller is referring to when he says something like, "the bottom of the brass."

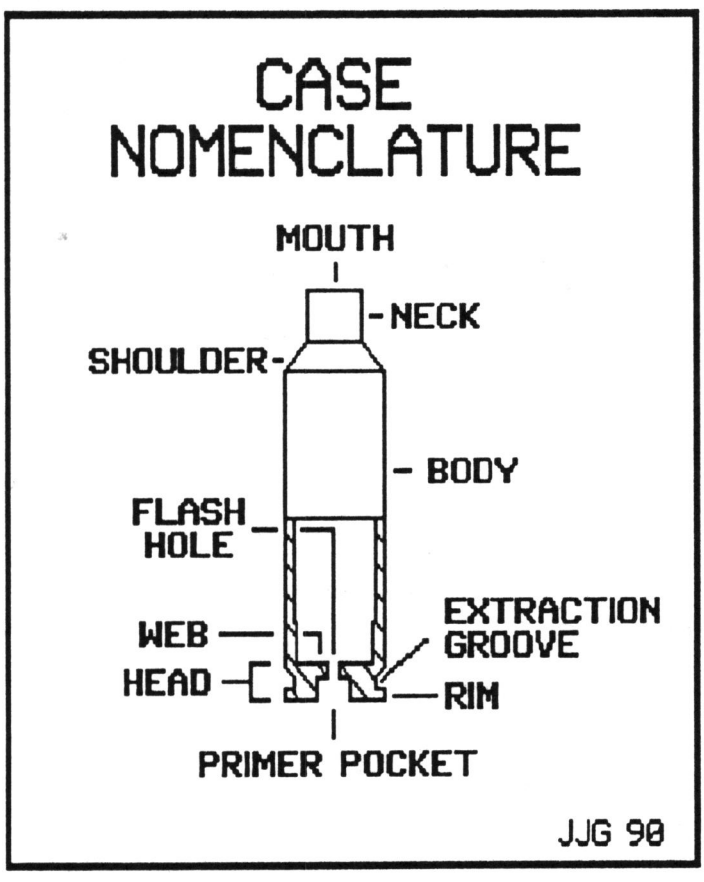
Anyone who has purchased a reloading manual, especially those published by Hodgdon, Hornaday, Nosler, Speer, etc., should be familiar with case nomenclature. Subjects important to safety and good loading practice are covered in detail and are generously illustrated. Reloading component companies have invested a lot of time and money keeping these manuals up to date. They are a good place for the novice to start and an excellent reference for those who are more advanced.

It's not my intention to get into fundamentals here. Most precision shooting subscribers are technically advanced and savvy people, but there are those who fall somewhere in between "plinkers" and tournament benchrest shooters. They've recently become bored with minute of angle accuracy, or worse, and are looking to do more with their existing equipment. If you would describe yourself in these terms, this article is for you.

The attached outline, supplemented by the case nomenclature drawing, is the basis of the following discussion and should be easy to follow.

Starting at the top, the case mouth is one area that is often overlooked. We all know that the mouth must be chamfered both inside and out, but few shooters realize just how important it is.

The chamfering of the mouth accom-



WALLER
NORWALK•CONNECTICUT•USA
Waller Bags and Cases, created for shooters, are made in the USA and considered the finest available. They have an Adjustable/Removable Interior Partition System. If displeased with any Waller product, it will be replaced or your purchase price refunded.
Waller Range Bag
Colors: Black, Grey, Navy, Red
Size: 9"H • 11"W • 26"L
$140.00
Amex, Visa and MC accepted
Call Toll Free 1-800-874-BAGS
or in CT 1-838-4083
Send $2.00 for catalogue
W•WALLER•&•SON•INC
142 New Canaan Ave • Norwalk, Connecticut 06850

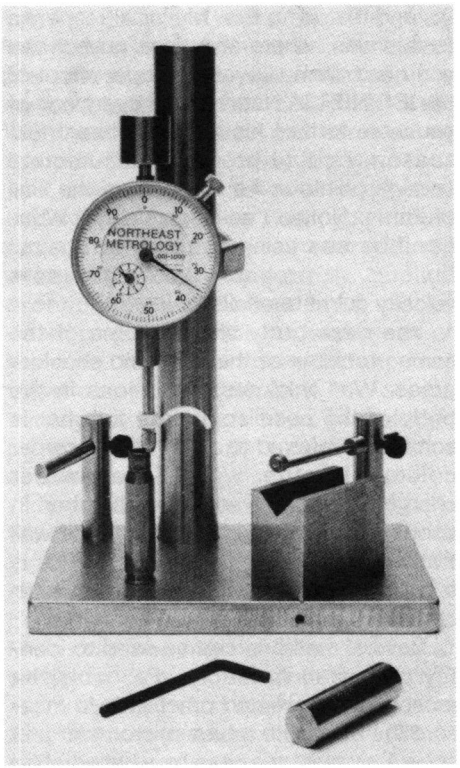
plishes two things: First it facilitates bullet seating by giving the base of the bullet (especially flat based bullets) a head start into the case; second, it keeps the brass edge from scoring or shaving copper material off of the pressure ring and sides of a jacketed bullet.

The case mouth must be perpendicular to the body for much the same reason as the barrel's crown must be perpendicular to the bore. It's important that the bullet leave the bore, or mouth in this case, as uniformly as possible and not hang up on one side longer than another. The bullet must "disengage" or "disconnect" at precisely the same time or an imbalance occurs.

If the case neck is too long it may contact the leading edge of the barrel's lands and result in difficult chambering of the cartridge. It can also crimp the neck around the bullet and create additional pressure when detonation occurs. Necks should be checked for splits, brass flow from the body, and hardening.

Unexpected hard chambering of a loaded round may indicate brass movement. Wall thickness should be checked periodically with a tubing micrometer to insure uniformity. A thickening of the neck area also restricts expansion in the chamber and results in difficult bolt operation.

Shooters that have custom target rifles built to benchrest standards neck turn their cases to a uniform thickness to accommodate the dimensions of a custom chamber. Most benchrest competitors believe that .002" clearance between the loaded-round neck dimension and the chamber's neck dimension is about right. Factory chambers, out of necessity, allow as much as .010" to .012" clearance to insure safe chambering all brands of commercial ammunition. This condition significantly contributes to diminished case life.



Brass hardening is something that cannot be prevented. All cases, after repeated firing, eventually succumb to it. You are likely to first notice it in the bullet seating operation. Bullets become easier to seat as the neck loses its elasticity. You'll find that it no longer "holds" the bullet with uniform tension. If you have to go to a tighter sizing die or smaller neck bushing to achieve uniform tension it may be time to work up some new brass or consider annealing the old ones. This can be done quite successfully with a burnz-o-matic torch, a pair of pliers, a pan of water, and a little guidance.

You should inspect the inside of your case necks for scratches that may retard the bullet's movement in the neck upon discharge. Some shooters polish the insides of their necks. I don't think this is necessary, but it is important to keep them clean at all times. Phosphor bronze bore brushes will do a fine job in the inside of case necks and will not cause the kind of scratches I'm referring to here. I save worn bore brushes to clean the inside of my case necks and they more than suit the purpose.

As in anything else, "excess" can lead to problems. Over sizing case necks can dramatically reduce case life. This is one area that needs to be monitored quite closely if you expect to get top performance from your equipment. As previously noted, uniform neck tension is critical to accuracy.

Excessive sizing results when one of two conditions exist. The brass has either become work hardened, less flexible, and therefore unable to hold the bullet in place, or you have cut your case necks too thin. It's pretty difficult to "wear" case neck dimensions thin using any of today's commercially available metal cleaning products such as Flitz, Brasso, Never Dulll, etc. Having to size necks .006" - .007" in a custom chamber is a fair indication that you have case problems.

The shoulder of your cartridge can also tell you something about the condition of your equipment and loading technique. It can tell you whether or not you have a clean chamber, free of extraneous material or particulate.

On occasion, I've found impressions of bore brush bristles, cleaning patch strings, powder granules, etc., on the case shoulder. By anyone's standards, a bore brush bristle wedged between your cartridge and the chamber cannot be considered desirable and conducive to accuracy.

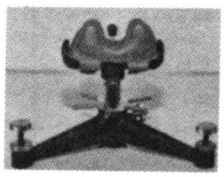
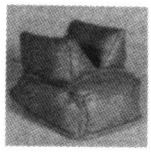
McCLUSKEY
PRECISION RIFLES

• .25 CALIBER BULLETS •

86 GRAIN, 9 OGIVE, .046″ MEPLAT, FB, BULLETS MADE IN SIMONSON CARBINE DIES. CURRENT SUPPLY IS VARMINT HUNTING GRADE MADE FROM .0005″ AND UNDER JACKETS. $14.75 PER 100, PLUS SHIPPING CHARGES.

• ACCURACY RIFLESMITHING •
• CUSTOM RAIL MACHINE RESTS •
• CUSTOM CASE FORMING DIES •

R.E. McCLUSKEY
102½ NW 36TH STREET
SEATTLE, WA 98107
206/632-6579

PROTEKTOR MODEL
MADE IN U.S.A. 100%

We want the benchrest shooters to know that we are prepared to supply you with custom made bunny-ear and rabbit-ear rear bags that are two inches taller, and incorporate thicker sides and bottoms. See your dealer; if no regular dealer you may contact us directly.

PROTEKTOR MODEL
7 Ash St., Galeton, Pa. 16922
Phone: 814-435-2442

CLARENCE HAMMONDS

NOW STOCKING

— Small base die (takes the base of the case down to original size). With special shell holder. $60.00

— Shoulder bump die, for Wilson bushings. Also neck sizes and decaps. $125.00

— Now making dies, to full length size with Wilson bushings. Will also bump the shoulder, and full length size. $150.00

HAMMONDS GUN SHOP
R.D. #4, Box 504, Red Lion, Pa. 17356
Phone (717) 244-7879

Care should be exercised not to score the shoulder when outside neck turning a case. I, on one careless occasion, did not pay attention to the relief angle of the cutting tool relative to the angle of the case shoulder. I scored the shoulder so deep that, upon firing, the neck separated from the shoulder and remained in the chamber. This causes a great deal of anxiety during a match. Luckily my brushed cleaning rod was near by and I was able to get it through the inside of the neck and extract it from the chamber without too much trouble. Future problems in this area were addressed by having the angle of my cutting tool ground back to 45 degrees. The sharpest shoulder I have on any of my wildcat cases is 40 degrees. End of problem.

Another thing to look for in the shoulder area is definition of angle where the case body meets the shoulder. A clean sharp line is indicative of proper fireforming. When the case has been completely expanded to fill the outer limits of the chamber, it can be pressed into match case service.

Please don't write and ask me to explain why some remarkable groups are fired while fireforming cases. Speculating on how this condition can be achieved or replicated in match conditions gives me the heebee jeebees. (Although I will admit to firing an entire yardage with unfireformed .220 Russian cases, I will not share the details of the unglorious result with you.) Which reminds me . . . last week a fellow wrote to me and suggested that I invert my bullets in the cases and let 'em fly. Said he'd shot some groups in the 0's and 1's doing this. My initial response to this was, where are these guys when you need them, like at the super shoot or the IBS/NBRSA Nationals? If every one of you were to take his advice to heart next season, I could probably accumulate enough points to be inducted in the Hall of Fame. Notice I said "probably." Wonder if he was using flat base or boattail bullets . . . probably would get more velocity out of boattails!?!

The case body shares some of the same problems as the neck and shoulder areas. Wall thickness variations in the body of the case contribute to what is commonly referred to as an offset powder column. In other words, the powder charge is not centered in the chamber. In sporting cartridges, I have seen case wall thickness' vary as much as .007". This is a totally unacceptable condition with respect to match cases.

Several methods can be used to identify case wall variations. Probably the most widely accepted practice is to measure the neck with a tube micrometer and accept or reject the case by what you find there. The theory being that if the neck is not within an acceptable tolerance the body will not be either.

Random sectioning of cases is another way that precisionists detect less desirable cartridge cases. This approach is labor intensive and has a very negative impact on your supply, so it is not something that you want to do a lot of. When I purchase new brass from one of the bulk suppliers, I section a half dozen or so just to satisfy my curiosity. I then compare the physical characteristics of the new brass to the previous lot.

There are some rather sophisticated mechanical and electrical gadgets available to reloaders for testing case wall thickness variations. The accuracy den's internal concentricity comparitor (ICC unit) is one such tool on the electrical side, and the new BRM Industries' Multidimensional Case Gauge is representative of the mechanical approach.

Several articles have been written about the accuracy den ICC unit and case segregation by electronic scanning. Until recently, very little had been done to fill the void in the marketplace created by the unavailability of the once popular audette case wall thickness testing device. Those who prefer a more conservative mechanical approach to testing case wall thicknesses will find the BRM Industries tool up to the task. Next month we will be reviewing the BMR tool and its multitask applications. If you are interested in additional information on either of these units, it can be had by contacting:

ICC Unit

Accuracy Den
25 Bitterbrush Rd.
Reno, NV 89523
(702) 345-0225

Multidimensional Case Gauge

Precision Reloading, Inc.
P.O. Box 122
Stafford Springs, CT 06076
(203) 684-7979

Both companies are *Precision Shooting* advertisers and therefore dedicated to providing you with the finest accuracy-related products available.

If after checking your cases, you are convinced the problem does not lie in the quality of your cartridges, you might consider casting your chamber to satisfy your curiosity and see whether or not you are the victim of a sloppy chamber job. Benchrest gunsmiths will be the first to tell you, if a barrel is not indexed properly in the lathe, the best reamer in the world will not produce a good chamber. If the barrel is spinning out-of-round, the portion of the chamber nearest the base of the cartridge will be elliptical. This is a completely unsatisfactory condition if you are expecting your rifle to shoot 1/4 minute of angle groups or less. If you fire cases in a chamber that is out-of-round, you almost certainly are going to have problems. If the condition is extreme, a very uncommon occurrence I might add, you would have to index your cases and put them in the chamber the same way each time you fired them to achieve any measurable amount of accuracy. Of course, if you are not reloading the cartridges and just letting them fall on the ground, a very expensive proposition these days, you probably won't be too

Congratulations Mitchell R. Maxberry

1000 YARDS

We are proud Mitchell chose our barrel to win the 1000 yard Leech Cup at Camp Perry. He then used our barrels in five out of the six matches involved to become the National Long Range Champion and set a new National Record of

1435-65X

KRIEGER BARRELS, INC.

18697 W. Clinton Drive • Germantown, WI 53022

concerned with this.

Another thing I inspect my cases for in between tournaments is internal powder residue build-up. I'd like to draw a parallel between the problems pipe smokers have in maintaining their "furnaces" and the problems associated with carbon buildup in cases.

Pipe smokers know that one of the quickest ways to destroy a quality pipe is to let carbon build up in the bowl. They call this buildup crust. They will allow a certain amount of buildup, in fact it's considered desirable; but when it gets too thick it causes problems. Crust not only reduces the bowl capacity of the pipe, but has an uneven insulating effect on the interior of the bowl, causing some areas of the wall to get hotter than others. This uneven temperature distribution ultimately leads to cracking.

I believe the pipe bowl and cartridge comparison is relevant to our discussion because the very same problems can occur if you neglect to examine the interior of your cases.

I use straight white vinegar and an ultrasonic cleaning tank to clean my cases. Small capacity tanks can be purchased at jewelry supply houses and in the drafting section of large art supply stores.

Generally, I clean my cases when I return home from a weekend tournament. Sometimes I let them go for two tournaments, but not beyond that.

Another thing to look for, and quite seriously, are signs of impending shoulder or head separation. This condition can often be avoided by knowing what to look for. An ominous white ring that may extend completely around the diameter of the case should be your first clue. It is commonly found in the case head area, slightly above the web, but can also be found at the shoulder/body junction.

If a white ring is observed in either of these two areas of the case, you should call a magnifying glass into service and examine the case very carefully. You will probably be able to see small cracks developing around the circumference of the case. Don't even consider shooting these cases one more time. It is an extremely hazardous condition. Your physical well-being is worth a lot more than a couple of cases.

Head separation generally occurs when cases are reloaded and shot one too many times. It is possible to blow the head off of a new case by overloading a cartridge or using the wrong powder. More than one rifle has been put out of service by careless reloading. Thankfully, I don't have any first hand experience at this, but I have seen evidence of it on many public ranges around the country.

Another thing that needs to be checked prior to loading is case length. If your cases have been fired many times and not checked for overall length (OAL) you're asking for trouble. Cartridge cases that are too long contribute to difficult chambering, neck crimping, and excessive pressures, not to mention the fact that you may not even be able to get the round into the chamber if it has grown beyond an acceptable tolerance. Consult any loading manual or your gunsmith for the recommended OAL of your cartridge.

If your case head looks burnished, polished by rubbing, this may also be indicative of something. More than likely your load is too hot. Well, at least "warm" enough to cause the case head to be seated firmly against the bolt face and polished by the bolt when it is opened.

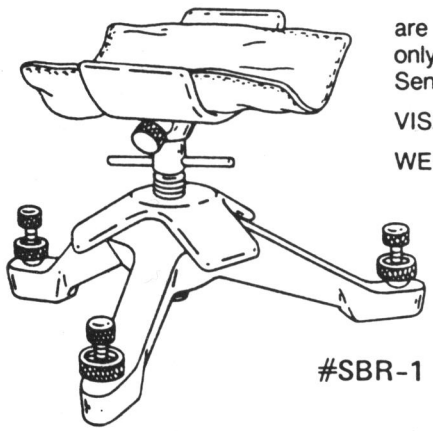
Primer pockets can and do cause problems if not attended to properly. Benchrest shooters spend a great deal of time cutting them to uniform depth, cleaning them after each firing, and inspecting them between matches. Flat-bottomed and radius-free primer pockets contribute to uniform ignition by allowing the primer anvil to be uniformly compressed from case to case.

Several problems can be identified by looking at a detonated primer. If primer cup material flows back into the firing pin hole of your bolt face, you have reached what might be considered a maximum load. If the face of the primer is visibly cratered and the cup no longer has a radius, you are right on the edge and should consider backing the powder down a bit.

If the base of your cartridge is excessively dirty you could be experiencing one of two problems; either you have undersized primers, or the more common of the two, loose primer pockets. Primer pockets loosen up when the cartridge has been overused. The brass has weakened under the strain and there isn't really much you can do about it. At this point you should consider going to some new cases. If you don't you may begin to scar the face of your bolt. Blow-back material will pit the surface of the steel and burn a distinctive ring around the firing pin hole. This doesn't really hurt anything, but I don't like to see it on my equipment.

If you out and out blow a primer, something I have done regularly playing with .17 caliber cartridges, you'll know it. You'll smell strange smells and hear strange sounds. Your primer will also have a hole or two in it, the bottom of the case will be covered with carbon, and

Freeland-Made Accessories



are the finest in the world! We manufacture only quality equipment for the serious shooter. Send $2.50 for our full-line catalog.

VISA & MASTERCARD accepted.

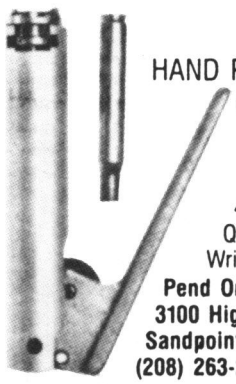
WE ACCEPT NRA AWARD POINTS!

TOLL FREE ORDER LINE
1-800-447-1666

INQUIRIES 1-309-788-7449

#SBR-1

FREELAND'S SCOPE STANDS, INC.
Dept. PS
3737-14 Avenue
Rock Island, Il 61201



RAIHA
HAND PRIMING TOOL
uses RCBS type shellholders.
Adjustable for priming depth.
4.5 inches long.
Quality materials.
Write for literature:
Pend Oreille Sport Shop
3100 Highway 200 East
Sandpoint, Idaho 83864
(208) 263-2412

your bolt will need some attention too.

The flash hole is another area that needs to be looked at. When the factory punches the flash hole into the cartridge it often leaves a burr. This burr, if gone unchecked, will cause irregular or uneven flash dispersion when the primer is ignited.

Flash hole deburring is considered by many to be one of the most critical of all case preparation procedures. The burr extends the intended distance of the flash hole in the web. By not eliminating it you are actually igniting the powder from a different point from case to case. This is assuming all your burrs are not equal in length or angle.

Commercially available flash hole deburring tools serve two purposes. They cut the flash hole to a uniform diameter and also remove the burr from the inside of the case.

A primer pocket uniforming tool, a flash hole deburring tool, and a priming tool that allows you to "feel" seat the primers will go a long way to improve accuracy. These tools are essential to the new guy trying to extract a greater measure of accuracy from his present equipment.

If a new "accuracy-minded" shooter is willing to purchase a few of these tools and try segregating his cases by weight alone, you can promise him dramatic results. Most of them will come back to you with glowing reports, targets in hand, and hopefully sustained interest.

The remaining parts of the case, i.e., the web, the extraction groove, and the rim generally do not give too many people problems. You are not going to get into serious trouble unless the case manufacturer has done a sloppy job of forming the cases to begin with. Your cases will weaken in the neck area and render them unusable long before you will experience problems.

A few of the things to look for in these areas are a uniform and sufficiently thick web, clean extraction groove lines to facilitate extraction, and damaged rims that would prevent you from extracting a fired case.

If you are new to all of this you must be thinking this guy is nuts! He's suggested everything short of keeping loaded ammunition at a constant temperature during a match. I didn't forget . . . I'm saving it for another time!

Lilja Precision Rifle Barrels, Inc.

Proven in the major Benchrest Tournaments: The Super Shoot, NBRSA and IBS Nationals, The Cactus, The Crawfish, and Regional Matches.

Lilja Barrels are available in stainless steel for:

- Benchrest
- 1000 Yard Benchrest
- Rifle and Pistol Silhouette
- Highpower
- Smallbore
- High Grade Hunting Rifles

Special Contours, duplication of some commercial contours and fluting on request. Sporter contour barrels available in chrome - moly. Fitting and chambering offered on a limited basis. For more information contact:

Lilja Precision Rifle Barrels, Inc.
P.O. Box 372
Plains, Montana 59859
(406) 826-3084

SPENT CARTRIDGE CHECKLIST

Mouth	
Perpendicular to case body.	Uniform chamfer inside and out.

Neck		
Check for splits, material flow, length, and hardening.	Signs of bullet's pressure ring on loaded round, or excessive powder residue.	Rough or Scratched inner wall surface.
		Excessive neck sizing.

Shoulder		
Insure neck has been turned completely to neck/shoulder junction.	Signs of foreign material in chamber i.e., powder, bore brush bristles, patch string, etc.	Well defined shoulder/body junction, indicative of proper forming.

Body		
Hard chambering due to excessive expansion. Need full length resize each time.	Signs of foreign material in chamber i.e., powder, bore brush bristles, patch string, etc.	White ring or surface cracks indicating impending case head or shoulder separation.
Hard chambering, check OAL and trim if required.	Internal powder residue build-up.	Nonconcentric.

Head	Primer Pocket	Flash Hole
Burnish marks on head may be indicative of too hot a load.	Uniform diameter, depth, and flat bottom. Also look for cratered primers.	Uniform diameter, centered in primer pocket.

Web	Extraction Groove	Rim
Sufficiently thick to insure safety after repeated Flash Hole cleaning/cutting.	Clean lines to facilitate extraction. Marks from bolt extractor indicating difficult extraction.	Worn or damaged to the extent that extraction is difficult.

Letters To The Editor

Being a new subscriber to *Precision Shooters*, boy, have I learned a lot, not only about shooting and equipment but about the people that make up this great fraternity of shooting.

I guess I'd have to give credit to one individual for most of this; because of him that I'm a subscriber.

One of the things that impressed me was the recent articles about one of the Clan. I'm referring to the expression of so many people about Fred Sinclair. I thought this was great because so many times we wait until a person is deceased before we express our admiration for that individual. And so that purpose of this bit of writing is to express my thoughts and feelings about one of the great of our fraternity that is so deeply involved in the shooting sport.

First of all I came to know this man through his son and one of his friends. He and his wife had just moved to this area and they did not know anyone except the son and family and this friend. on my first visit to his shop I stayed only a short time because I thought it enough for the first visit and he said "you just got here, the next time come to stay all day." His expression was a little sharp but I passed it off. On the next visit we got talking about this magazine and he asked me if I was a subscriber? I said "no" and his reply was "why not" in a rather gruff way. A few days later I received a copy in the mail from the subscription editor. I thought this was a real act of kindness and that gruff approach was not as bad as it sounded. After several visits my wife and I took him and his wife for a ride to view the country side in this area. They were so impressed and so grateful for this act, you'd have thought that we gave them the whole world.

A couple months later he had to have an operation. It was a painful recovery and this gruffness appeared quite often, with good reason. I tried to cheer him up by kidding, etc. Once again his true character appeared when one day he said "thanks for trying to cheer me up."

Many times since then he and his wife have thanked me for small deeds that were nothing more than common courtesies.

The kidding has increased between us. He, from what his wife says, look forward to my visits and I know I certainly enjoy them.

Through all this I have grown very fond of this man, not only as a man you can believe and trust but as a real craftsman and a Great Benchrest Gunsmith—and last but not least a man that I would be proud to call "Dad."

I take my hat off to you, the great one—Seely Masker.

Thank you,
V. Allan Merkle
90 Fairvale Dr.
Buffalo, NY 14225

Dear Dave,

Regarding Mr. Nagy's two target experiments and his dilemma expressed on page 47 of the September issue—

As a perfect group (.000) is formed at 200 yds., each successive bullet in the group will cause the hole in the 100 yd. target to close proportionately. I've fired several such groups. After about ten or twelve shots in the .000 group, the 100 yd. hole has shrunk to about 1/3 of the bullet diameter. It is obvious that if enough shots are fired into the .000 group, the 100 yd. target will completely heal. As Mr. Nagy becomes a more accomplished marksman, he will see this trend.

Regards,
Karl W. Schmidt
6 Silver Maple Ct.
Baltimore, Md. 21202

P.S. He's on the right track by selecting match grade lots of beer, I've found it to be an important part of my accuracy experiments outlined above.

Dear Dave,

I have found benchrest shooting to be the perfect hobby. The people make the sport.

This past Saturday, September 15th, I held a 100 and 200 yard match. The biggest crowd I can remember came. Everything went off without too many hitches, and I think everyone had a good time. Well, Sunday morning I received a call from the gentleman that had won the 200 yard and Grand Agg., stating he had not won as we had announced, but the scorer had missed a clear 9 and marked it a 10. The prize money and targets had been distributed, no one would have known differently, but he would have.

It is people like joe Frievald that make Benchrest the Great experience it is.

Sincerely,
John C. Wagner
42 High Hill Drive
Pittsford, N.Y. 14534

PENCE
PRECISION BARRELS
17 Cal.-50 Cal. Cut Riflings
Hand-Lapped
Stainless Steel Rifle Barrels

Engineered By: R.G. Sherer
Owner/Operator: Ron Pence

Free Price List Available

PENCE PRECISION BARRELS
R.R. # 2 Rd. 900 S.
S. Whitley, In. 46787
219-839-4745

SCHNEIDER BULLETS

22 CAL. — 52 GRAIN @ $9.50 per 100

6MM — 63, 65, 68, 70 GRAIN @ $10.50 per 100 BT or FB

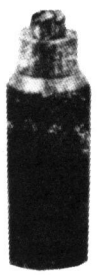
30 CAL. 110 · 150 @ $15.50 per 100

All bullets made in carbide dies on selected jackets.

Shipping charges will be invoiced.

ROGER SCHNEIDER
3655 West 214th Street
Fairview Park, Ohio 44126
(216) 333-1581

Primer Pocket Tools

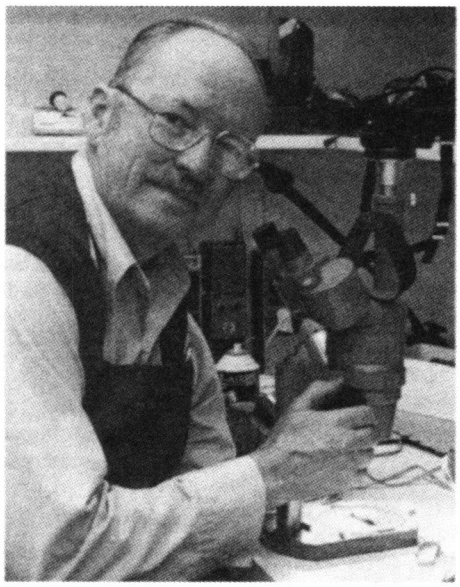


Match Prep

Two types of carbide-tipped tools help you produce better handloads. Both have knurled handles, and carbide tips should last indefinitely. MATCH PREP's shoulder produces uniform depth and flat-bottomed primer pockets to SAAMI specs, also cleaning out primer grit. The LIFETIME TOOL is a cleaner only, for either rifle or pistol cases. Specify large or small, $12.50 each. MATCH PREP in 3 sizes: small rifle and small pistol combined, or large rifle only, or large pistol only—specify; $22.50 each. Add $1 shipping for each tool. **Whitetail Design & Engineering, Ltd., 9421 E. Mannsiding Rd., Clare, Michigan 48617.**

Lifetime Tool

MERRILL MARTIN



Editor: Merrill has been kind enough to keep me posted, by carbon copies of the ongoing correspondence, concerning some of the goings-on with those one hundred shooters who were trying the firelapping kits that Merrill provided to the first one hundred shooters to reply that they would like to get in on the Grand Test. We grabbed a couple of letters to and fro that seemed both articulate and informative (PS definition of articulate . . . the editor essentially agrees with the points presented.) Hope that you enjoy them.

Hi Merrill!

I would like to compliment you on your fine articles in *Precision Shooting*. Yours are the first I read. I like your work because you tend to go by what works and not always by theory. Thank you for the free fire lapping kit.

Our efforts in fire lapping my friend Dean's .44 stainless Ruger Redhawk was rewarding. At the start I wanted to keep good accurate records for this write up but Dean is leaving the state soon and I had very little time to get things together.

Dean doesn't cast his own bullets but still wants to shoot economically, so I suggested that he try some cast bullets from Bull-X or Yellow Stone manufacturers. His complaint was that the bullets were not that accurate (4 inches at 25 yards fired from sandbags—load was 20 grains 2400 240 grain SWC BB) and he has had leading approximately 1½ inches from the throat to about 2½ inches up the bore that could not be scrubbed out with a brush. We had to remove the lead with a Lewis lead remover.

My hunch is that the barrel has a tight spot in it and it needs the burrs removed. Also in my opinion, the bullets are not that accurate (bullets have a big bevel on the base) and I think they are too hard.

I started the program as follows:

We scrubbed the bore clean of all leading, then slugged the bore with a soft 180-grain WC. It measured .4292 at the tight spot and .430 around the muzzle. In order to check the muzzle end we drilled a hole (8-32 clearance) through the slug in my lathe and attached it to my cleaning rod using an 8-32 screw. I could then bump the slug down the desired distance and pull it back out of the bore without bumping the slug the full length of the bore. I could not get a real good feel of the bore with the lead slug. To get a better feel of the bore diameter irregularities, I made up a jag .400 diameter to use with an oily patch. You must clamp the barrel in a vise for this procedure and with both hands on the cleaning rod drawing it back and forth through the bore. This method made it quite easy to recognize the tight spots. After recognizing what we had to play with we discussed our loads and this is what we came up with:

5 soft cast 180 grain WC—240 grit
5 hard cast 240 grain SWC—320 grit
5 soft cast 180 grain WC—320 grit
10 hard cast 240 grain SWC—400 grit
10 hard cast 240 grain SWC—600 grit
10 hard cast 240 grain SWC—800 grit
5 hard cast 240 grain SWC—1200 grit
5 soft cast 180 grain WC—1200 grit
5 hard cast 240 grain SWC—green rouge
5 soft cast 180 grain WC—green rouge

All of the above bullets were loaded with 4 grains of Bullseye, Federal 109 primers and with P-wads inserted behind the bullet. The hard bullets were manufactured by Bull-X and according to Bull-X they were a 15 Bhn. and the soft bullets I cast myself of sheet lead (very soft). Since we didn't have a punch to cut the P-wads we sharpened the mouth of a sized 44 case with a deburring tool and used the case for a punch. In order to be sure the P-wads were flush with the base of the bullet I seated the bullet on top of the P-wad and clamped the tip of the bullet in the vise and pulled the case off the bullet. The P-wad was left in the case, making an air tight seal. We thought the bevel on the base of the bullet would not promote a good gas seal with the P-wad, so I squared the base of the hard cast 240 grain Bull-X bullets in my lathe.

Our reasoning behind using a mixture of hard and soft bullets with the 320, 1200 and green rouge was this: We shot the 5 soft in the coarse grit because we thought they would fill the bore better, be more abrasive in the removal of tight spot and the 5 hard bullets in an effort to keep the bore uniformed. We were afraid that all soft would open the forcing cone up too much and all hard wouldn't remove the tight spots. When we fired the bullets that were loaded with the 1200 and green rouge, we swabbed the barrel first with a thin coat of the corresponding compound on every other shot to attempt to put a better polish on the bore. The lapping bullets were fired in rapid succession and the barrel was cleaned thoroughly after each 10 shot string.

In the accuracy department all groups

SCHNEIDER RIFLE BARRELS, INC.

Pull buttoned in Stainless Steel.
22 RF thru .375 calibers.
Standard and custom contouring, including fluting with lapping and stress relief **afterwards.**

GARY SCHNEIDER
12202 N. 62 PL.
SCOTTSDALE, ARIZONA 85254
TEL. (602) 948-2525

were fired from a Ransom Rest at 50 yards. Our accuracy loads are as follows:

240 grain SWC BB (Bull-X)—20 grain 2400

250 grain Lyman SWC GC Alox lube—21 grain 2400

200 grain JHP Hornady—20 grain 2400

240 grain JHP Hornady—20 grain 2400

Before our fire lapping procedure the 240 gr. SWC BB averaged about 6 inches, the 250 grain Lyman shot the best at 3 inches. After the lapping we cleaned the barrel thoroughly, now the barrel had a nice shine to it. First we fired the jacketed ammo. The groups strung vertical about 2 inches wide by 4 inches high. Then we cleaned the barrel and fired the Gas check ammo. This again shot the best as the first 4 shots were all touching. The group shifted about 3/4 of an inch to the left on the last 2 shots with both rounds touching. The next 6 rounds started grouping with the last 2 rounds of the first group and ended up drifting a little farther out to the left. All rounds fell in 2 1/2 inches. The interesting thing about the grouping was that all shots seemed to cut the previous hole (Dean watched with Binoculars). I have a feeling that my rest, grips, or the bench was moving because all the groups seemed to be drifting to the left and up. Groupings with the lapping bullets were pretty good, they fell within 3 or 4 inches. I saved a few 250 grain Lyman GC to fire from a sandbag at 25 yards with open Millet sights. The first 3 rounds went through the same hole, the other 3 clover leafed around the first hole! I fired this gun when it was new for accuracy with the same load at 25 yards on a sandbag and it scattered 6 shots in about a 2 inch circle. The improvement in accuracy is very evident after the lapping procedure. Cutting holes with this pistol is easy now, hard to do before, the bore is polished smooth now, leading is minimal and cleaning is a breeze. With a clean bore it slugs at .4302.

Merrill, I have a few questions for you:

1. Let's say you have a barrel that measures tight around the muzzle end. Do you think swabbing the tight area with a thin coat of lapping compound and shooting hard slugs sized slightly smaller than the tight area of the barrel at a slow velocity would help in removing the right area without opening up the throat too much?

2. I shot the Bull-X bullets for accuracy after firing the 250 Lyman GC without cleaning the barrel. The first six rounds shot all over the target; the next six rounds tightened up to about a 6 inch group, then the load settled into about a 4 inch group. Could this have been from the Alox lube left in the bore clashing with the different type of hard lube used on the Bull-X bullets?

Keep your powder dry,
Peter Single
7924 Philadelphia Road
Rosedale, MD 21237
(301) 866-8454

Dear Peter:

Many thanks for the before and after on the pressure lapping.

A couple of observations—

You probably should have fired more 220 grit bullets, both hard and soft. This is the stuff that cuts away the tight and tough spots. The finer grits just polish the bumps.

For accuracy with heavier loads, try reducing your 2400 down to 18 grains.

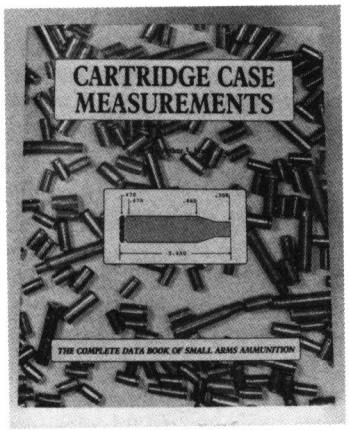
A barrel that measures tight around the muzzle end will give you fits!! Swabbing won't do much good. Just take a deep breath and fire a bunch of hard 220 grit through, and follow up with your regular

A Great Christmas Gift!

The first book to bring data on virtually all small arms cartridges together under one cover . . .

CARTRIDGE CASE MEASUREMENTS

by Dr. Arthur J. Mack



- Gives basic measurements *(rim, head, shoulder, neck, length, plus bullet diameter)* in both English and Metric
- Lists over 5,000 cartridges of all kinds — virtually every small arms cartridge ever made
- Gives synonyms *(over 12,000 cartridge names)*
- A **MASSIVE** easy-to-use index *(alone worth the price of the book)*
- Data listed in order by selected measurements for easy comparison and identification
- Hundreds of experimentals and wildcats
- Based on over 10 years research
- A virtual encyclopedia of small arms ammunition
- Contains data that has not come to light for many years

Originally published at $49.95

***NOW ONLY* $16.95**

plus $3 postage and handling

(VA residents add 4.5% sales tax)

TO ORDER:

Send check or money order to

AMREX Enterprises

P.O. Box 754 • Vienna, VA 22183 U.S.A.

(sorry, no credit card orders)

CLEARANCE SALE!!!

Only a few copies left in stock.

NOW, WHILE THEY LAST,

ONLY $16.95

(plus $3 shipping).

routine. Don't size undersize, or you may gas-cut. As long as it is smooth and progressive, the throat opening won't harm the group.

If the Bull-X bullets were plain base and you fired them after shooting the GC loads without cleaning in between—yes, you had problems. The GC leaves a trace of copper fouling which raises hell with plain base bullets following. It wasn't lube problems.

You did really well and got your accuracy improvement. Now, you have to work on more precise bullets and loads; and, if all else fails—"Learn to Shoot."

Have fun!

Merrill D. Martin

A MARSTON BALLISTIC LAB TEST REPORT (DOONAN'S SHOP)

Ed Doonan June 30, 90

PROLOGUE Traditionally every year during the dark days of January and February I amuse myself with a cast bullet test. It gives me an excuse in the name of science to shoot about 1,000 rounds indoors at 50 feet.

I'm often asked if I think the results hold up outdoors at longer ranges. YES—**IF**—you assume a projectile of sufficient ballistic coefficient and velocity. Obviously a great 50 ft. round ball load isn't going to be a great 200 yard match load.

This year's test was inspired by Merrill Martin's offer in *Precision Shooting* to give away an abrasive kit for pressure lapping a rifle barrel. WELL! What could be better, something for nothing! Bound to appeal to a cast bullet shooter. When the kit came it was even better than represented. Six grades of abrasive; 220, 400, 600, 800, 1200, and green rouge, material for P. checks, and a bottle each of Rem-oil & Rem-clean.

PRECONCEPTIONS I had already tried P. checks, mostly in a standard 308. Every time the P. checks increased the group size. However the load was not developed using P. checks, the checks were added to a load that was already shooting well. I have seen on Marston Range rifles with small cases shoot marvelously well using P. checks; but, was it because of checks or in spite of them?

I had already tried pressure lapping but under very controlled conditions. I had been influenced by an early article by C.E. Harris in *The Fouling Shot.* Results had never been detrimental and were usually good.

I had certain prejudices at the start of this test as every one who does a lot of shooting has. I made a real effort not to let my preconceptions influence the manner of the test.

PROCEDURE Basically the process is to fire a very soft lead bullet that has been rolled in abrasive through the barrel using a moderate charge of quick burning powder. Merrill states that it is imperative that a P. check be used. Of course you start with 220 and work through to the green rouge, 10 rounds of each. It is important that the abrasive be physically embedded in to the lead bullet. I put the abrasive on plate glass and used another piece to roll and embed.

No load development was done with any rifle so groups are *not* indicative of rifle accuracy or potential. It was the degree of improvement or the lack of it I was interested in. Blue Dot was used in a great many loads because: 1. I had it on hand, 2. S.D.'s are low even in large cases, and 3. it burns clean. Despite the off-hand manner of selection it proved to be a good choice.

EQUIPMENT An Oehler #33 with sky screens and lights was used to record all shots. All shooting was done indoors at 50 feet but group sizes were projected to 100 yards to make them more readable.

To make this test as meaningful as possible a wide selection of barrel conditions was chosen. The idea was not to necessarily make a super match rifle but to see if an improvement could be made to less than perfect barrels.

TEST RIFLES MOSIN-NAGANT 28-30, full military. Barrel was badly pitted (a thousand points of darkness) and had the worst jacketed bullet fouling that I have ever seen. I think that part of every jacket of every bullet that had ever been fired through it was still in the barrel. I tried about every well known bore cleaner on the market—they worked on it—but it was clear that I wasn't going to live long enough to get the fouling out. My final attempt at cleaning was fine steel wool wrapped on a heavy duty brass brush coated with J B bore cleaner. It did a good job of polishing the copper inside the barrel.

The rear sight was removed and a custom base made to allow the use of a Weaver K10. It is true that such a mounting puts the scope a long way from your eye and greatly reduces the field of view but with care it can be used.

Siamese Mauser in 45-70. Appears to be a cut rifled barrel of poor quality (maybe Numrich) reamer marks on the bore are plainly visible. The blank was purchased at a gun show and turned to approximate the contour of a Rem. 700 V. Nevertheless the rifle was known to shoot fairly well—400 gr. bullets at 1800 FPS into abut 2½" at 100 yards.

99 Savage refitted with a worn out M. 70 target barrel. This barrel had been used by a local competitor for NRA Course competition. He didn't know how many rounds had been fired through it but guessed it was in excess of 10,000 and lots of rapid fire. When the barrel was fitted to the Savage the 06 chamber was cut off and it was rechambered in 308. Barrel looked pretty good after recham-

CASE-GARD® Portable Rifle Maintenance Center

The PMC-1 is a truly **portable** rest for cleaning or otherwise working on rifles or O/U shotguns.

Features include padded supports with integral cleaning rod holders and storage compartments for miscellaneous gear and tools, with see-thru covers so you can easily find what you need. Rubber feet prevent sliding when used on a bench or table, or the PMC-1 can be used on top of the popular CASE-GARD Accessory Box, as illustrated.

Available in red or black, the unit is constructed of super tough polypropylene and measures 24" x 11½" x 4¼".

See your local **MTM** Dealer today, or write for information

MTM QUALITY in THERMOPLASTICS

MTM Molded Products Company

P.O. Box 14117 • Dayton, Ohio 45413 • (513) 890-7461

bering with only tiny, tiny pits throughout.

Steel sleeved 98 type Mauser action, shell holder bolt, Glass stock, set up for swap barrels. This rifle was fired with a Douglas 1-10 XX 30 cal. chambered in 30 Herrit, with a long leade for cast bullets. This is an example of a medium quality button rifled barrel.

Remington 788 in 7MM-08, CBA Production Rifle. This is an example of a quality new factory barrel. Blueing was still on the inside of the barrel.

This rifle is really outside of the perimeters of this test. It was shot outdoors 5 months after the other four rifles. Lino bullets were used to lap the barrel and no P. checks. I probably wouldn't include it but the results were positive.

I have observed here on the range that often the nearly new appearing production rifles and newly fitted Douglas don't seem to reach their potential until they are shot some. This is a simple observation and not scientific by any means.

THE TESTS Surprisingly the Mosin 28-30 was the most valuable rifle in terms of the amount of information gained. It made the most gains in accuracy from 3.15" before lapping down to 1.49" after. Unlike any other rifle in this test I started with some 180 grit I had in the shop. At that point I was sick and tired of fouling and was determined to either remove it or ruin the barrel. However, I was surprised by the basic accuracy of the barrel.

A strange event occurred at the end of the lapping test. I could already see that I had positive results cause the lapping loads were shooting well. The rifle was cleaned (not one touch or blue using Sweets) and the "after" load shot. WOW! I had an 18" group! Half the shots were in a tiny cluster that was about 1" projected. The other shots made full length keyholes! I thought about this for a while and then shot the rifle again without the P. checks. The rifle put 10 in 1.49. I repeated the test again with approximately the same results. The P. checks were causing the key-holes! But why? After too long of a period of time I came up with a theory. I'm pretty sure it's right but it is still just a theory.

This rifle has had its muzzle counterbored about 1 1/4" x 3/8. I think in some cases the P. check tries to fly around the bullet inside the counter-bore. In this case the P. check can push against the side of bullet causing the key-holes. That must be some shove considering the mass of the P. check versus the mass of the bullet plus the fact that the bullet is rotating pretty rapidly and doesn't want to stop doing that.

Of course this doesn't happen in a rifle without a counter-bore but it indicates that the P. check can accelerate past the bullet if it gets off centered with the base. It doesn't have the side of the steel barrel to wedge against but nevertheless an off centered wad that is still pushing should degrade accuracy. Throughout this test in all rifles, P. checks shot the same or worst groups than without, they *never* shot better groups. I believe the above condition is the reason.

I varied the test somewhat on the 45-70 barrel because the bore was so rough. I kept firing ten shot groups using 220 and inspecting the bore. Reamer marks were still visible at the muzzle after 30 shots but the breech was cleaning up well. I shot ten more and got an astoundingly small (for this rifle) group—1.86". At this point I quit with the 220 and moved down the abrasive scale by the normal 10 shot groups. At the end of the test reamer marks were still lightly visible at the muzzle. Rifle shot 1/2" smaller groups down from 2 1/2" to 2". Rifle was noticeably easier to clean.

The M 70 match barrel was easy to clean from the start. I used this barrel because I had a theory that perhaps a newly cut leade would be rough and that lapping would smooth the leade and cause an accuracy increase. No such thing happened—the rifle shot 1.1 before the test and a tiny bit smaller after lapping. I consider this increase in accuracy to be within the statistical error of the test and of no account. The only unexpected occurrence was with 600. A 10 shot group with an S.D. of 1 (one)! Evidently a worn-out barrel is worn out.

The Douglas barrel was known to have a .75 10 shot capability outdoors. The lapping definitely showed an increase in accuracy with the indoor load. The most noticeable thing that happened to the barrel was ease of cleaning. Before lapping if you pushed a dry tight fitting patch into the dirty bore you could count on it sticking. After lapping it went right through. Most of my interest is in Production Rifle Class so it is hard for me to get back to the heavy rifle with any enthusiasm. I should though; the rifle has real possibilities.

Unfortunately the 788 had mechanical problems that I didn't catch (the bolt touched the end of the barrel) and I ruined the lapping test for comparison purposes. The factory blueing was removed from inside the barrel and it was again easier to clean. It shoots lead well and I'm sure I can make it do better when I have time for load development. Good loads were averaging about 1 1/8 outdoors at 100 yards. I shot it in a Reg. match here at Marston and got 355. Not world class but hanging in there. Actually it was the shooter losing points in the wind that hurt the score. The thing that impressed me the most is that I didn't clean the rifle once during the 80+ rounds fired in the match nor did it appear to need it when I finally did clean after the match.

CONCLUSIONS This is one of the more interesting and productive tests I have run on cast bullets. Much better than the lube test I did—all that I knew at the

Continued on page 29

DWIGHT SCOTT

Specializing in

- Benchrest Rifles Built to Your Specifications
- Unlimited Class Rail Guns
- Custom Dies

SCOTT'S CUSTOM RIFLES

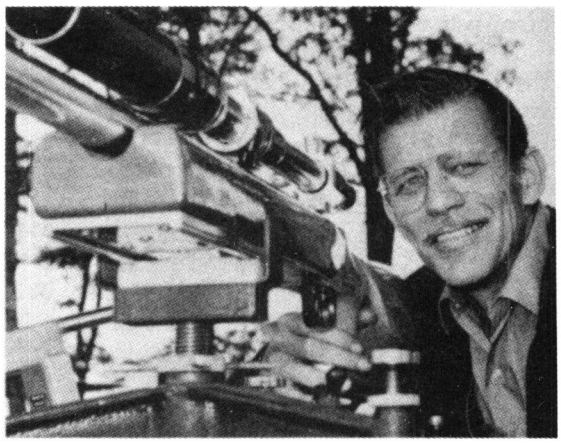
166 Hi Valler
Lake Orion, MI 48035
(313) 779-4735

Precision Reloading, Inc.
RELOADING PRODUCTS
"BIG FOOT GOOSE DECOYS"
PAUL KINGYON GOOSE & DUCK CALLS
MIKE WELLER'S GOOSE CALLS
Activ * Federal * Remington
Winchester * CCI * Lage Uniwad
Claybusters * Windjammers
Powder * Wads * Primers * Buffer
Once-fired Hulls & Brass
CubicShot, Lead, Copper, & Steel Shot
Bob Allen * MEC * Redding
Brenneke * Stalwart * Multi-Scale
Nosler * Carroll * Neil Jones * Wilson
Bald Eagle * Forster * Hart * Sinclair
Saunders * Aluminum Funnels
Multi-Dimensional Case Gauge
Case Gauge Masters * Mitutoyo
Weatherby * Buehler * Leatherman
Rig * Shooters Choice * Rusty Duck
Sweets * Ultra-Vibe Tumblers * Dewey
Sportsman Target Stamps
Sporting Clay Traps * Shooting Benches
FREE CATALOG
PRECISION RELOADING, INC.
P.O. BOX 122
STAFFORD SPRINGS, CT 06076
1-800-223-0900 For Orders Only
(203) 684-7979 For Information
203-684-6788 24 Hour Fax

The Backer Bit

by

Lt. Col. Rick Hornbeck



Backer systems are required by the rule books in all "group" matches. There seems to be, in recent months, a lot of attention coming back to backer systems in general.

As one of the "ole heads" in this game, methinks that I perceive a hint of overkill here, which is often the case when "something happens." Something does indeed happen when a backer system fails, or shuts down during a match.

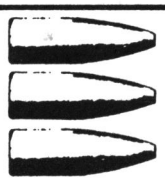
As I recall, the first backer system failure that I personally saw was at the old Tulsa range, during a night match. It, of course, failed while a world record was in the making . . . last relay, last match! This was in the very early 1960s. My friend and mentor, Larry Engelbrecht, had a .219 Donaldson that from time to time would come alive at 200 yards, a fairly common characteristic of a well assembled Wasp, at least from my point of view. On that evening I was shooting a deuce, but Larry had his Don stick working like a bandit that evening. He had held his own at 100 yards, sitting right on the buns of the yardage leader. Come to think of it, he still tends to do that, some thirty years later. After the first four matches at 200 yards, everybody and his brother at that range knew that Larry had a record going for sure, a real hot dinger. (Editor: we apologize for the occasional lapses of our columnists into surfer talk, when excited.) His final five record shots, on his final target, had no less than thirty-five scopes locked on that target. The last shot went into the group real nice like, and we all knew that we had just witnessed a new 200 yard heavy varmint class record being set.

When the target crew returned from the target line they looked like they had just learned that they had to change targets for the rest of the night. Looked like beat dogs. This backer had quit. No record. A bad moment for all. Larry never whimpered once; not then or on the ride home the next day. But the Tulsa club was really worked up about it.

The first thing I asked . . . how many times have you seen a backer fail? Stop and think about how many matches you have fired. From my point of view, backers over the years have done a fine job. Most malfunctions have been the result of human error, or an act of God, such as a real high wind, or a thunderstorm. Of the hundreds of matches that I have shot at Council Cup, I only saw one occasion of a backer failure, when a steel shaft sheared off the motor. I don't know how one would prevent that. We had an earlier-than-planned lunch, Wally ran to the shot and fixed it, and we were once again off and running.

There are any number of designs that will work, and work well. Before such designs are started, it seems to me that some criteria have to be established. (Editor: nonsense. As is common these days, let's do it first, and think about it second.) And let's also accept, even if we have to do so grudgingly, that "things will happen" that the best designed, built, and maintained backer system will not overcome. Very common. Didn't get turned on, for one reason or another. Improperly readied, or armed. Human errors. I don't know how you design out things like this. Pilots do, on occasion, you know, land short of the runway . . . even though the guy who designed the plane set it up for the pilot to land on the confounded runway. He even put in a throttle or two, in order to help the pilot with the task of putting it onto the runway. The darn things work too, if the pilot will only use them at the right time. Human error, pilot error, sorry! Brakes on cars work the same way, from time to time. As long as people are involved, Murphy's Law applies! Tell you something else . . . the only people who never make a mistake are the people who aren't doing anything!

No one has a good time when the backer quits when someone is in the process of setting a new record. The guy who shot it tends to be a bit snappish, and be a bit short with everyone around him. He frequently seems to be seriously



MATCH GRADE BULLETS

Fowler bullets have been competition proven in every major American benchrest event the Cactus Classic, the Crawfish Invitational, the Super Shoot, the Championships of both I B S and N B R S A, plus regional, state and local tournaments

These bullets are made by and for shooters who will accept only the best. They are hand swaged in Rorschach carbide dies from selected jackets, and subjected to rigorous quality controls to assure that dimensional and weight standards are met.

6mm: 63-66-68 and 70 grain flat base
Box of 100 — $11.50
Bulk pack of 1000 — $110.00
22: 52 grain
Box of 100 — $10.95
Bulk pack of 1000 — $105.00

We accept VISA MasterCard

Fowlers
4144 S. New Hope Road • Gastonia, NC 28054
Phone (704) 824-0026

SHOOTER'S NEWS & PRECISION SHOOTING INDEX OF ARTICLES

"THIS INDEX IS AN INVALUABLE TOOL FOR THOSE INDIVIDUALS LOOKING TO EXPAND THEIR KNOWLEDGE OF RIFLE ACCURACY AND RELATED TOPICS."

- **1947 TO PRESENT**
- **3200+ ENTRIES**
- **34 GENERAL TOPICS**
- **INDEXED BY AUTHOR, TOPIC, ISSUE DATE, AND PAGE NUMBER.**
- **$22 + $1 POSTAGE**

JOHN J. GAMMUTO
5685 FOREST HILL DRIVE
CLARENDON HILL, IL 60514

considering wrapping his rifle around a nearby tree. Certainly not having a good time. The host club's members are having a real bad moment, and most of the shooters at the match are not real happy about developments.

I've had the great pleasure of watching a fellow shooter set a new group or grand record several times. It's great! I suspect that the last time was at Johnstown, sitting next to Seely Masker, who was busily engaged in putting ten shots into a tiny little hole downrange, with his Wichita actioned cruiser rifle. When the last shot went into the middle of the group, I knew I was looking at a new record. Seely didn't; thought it was just a good group. But I knew that Marge was going to have to go out and buy a frame for a new IBS record certificate. It's really a memorable experience, watching a shooter who has his act together (if only . . . maybe . . . for that point in time) shooting "one for the book."

Well, back to this backer matter. Rapid changes of targets and backers have to be possible; a system that was perfection itself, but took a long time to get back into action after each relay would be no solution at all. Due to "help" problems that some clubs are faced with, there are often people involved, on the target crews, that really don't understand what has to be done, and the importance of their activity. If a club has people on their target crews that know, and care about, their jobs downrange . . . that's great. But often the match director is happy as a clam if he has enough help to get through the match with . . . never mind hoping for savvy and experienced help. We learn as we go. That, for some clubs, is the real world. Don't gripe about it until you yourself have run a match or two. Or offer your help to the match director, and go out front with the greenhorns and show them how to do the job properly. When I was president and match director at Wichita I had two high school kids that I spent an afternoon checking out. Those kids changed twenty targets and backers in short order, and I don't think ever made an error. By the way, did you ever stop by the target crew after a match, and tell them what a great job they did, and offer your thanks? Hey, what does it cost?

The backer system should be designed so that it does not cost the national debt. Not just the cost to build one, but rather the twenty or thirty-five that are needed behind your club's targets. It has to be able to be set up, and taken down, with relative ease by unskilled hands. It must be lightweight; heavy frames and backer systems are no fun at any time, and particularly not in a rainstorm. (How about that, Larry? I sort of suspect that you still remember the old steel jobs that we replaced!)

The system has to be easy to maintain and REPAIR. Do benchrest shooters shoot up frames? Do brown bears answer calls of nature in the woods? And when a stray bullet goes flying through a target frame and a backer system, the havoc that it can wreck would be enough to make a military authority on wound damage skeptical of what he was seeing! Somebody has to fix it, and if it stops the backer, then we have a mess of unhappy campers . . . competitors, directors, target crew, range officer, and probably a few more that I've overlooked. And it does happen. If it's a real fancy system that we are dealing with . . . we may be here for a while. When a bullet goes through a roll of backer paper . . . you've got a spoiled (read: ruined) roll of backer paper.

It would seem that some system has to be established to keep the backer with the target, or at least where it can be identified to match up with a given target. I've seen this develop into a sticky little problem on occasion, when there is a possible record fired.

And I might add here that it is worth your time as a competitor to review the current rule book, and learn what you are required to do if you shoot a possible record, and want to submit it to the record committee. Things have been known to get jacked up because the shooter thought that he had nothing to do . . . except sign autographs.

The current attention to backer design is just great, in a way. Some systems in use do just great. Not broke, and don't need fixin'. Others may well need attention, and the more suggestions offered, probably the better. I'd hate to see a specific system required by the rule book. This is an item that must be worked out by the club . . . and is solely the club's business (as long as the darn thing works acceptably, at least). Otherwise would surely be overkill. But good ideas and designs are always of interest, to those who must build, maintain and use the required backers.

There are folks out there who are building, and improving backer systems. At the IBS Championships, George Kelbly took me out in the shop and showed me the new system that he and one of his offspring have developed and built. It surely is a new concept, and it works. A DC motor drives the system, and the speed of the backer movement can be changed. The controls are housed within a weatherproof case. Target and backer changes take no longer than other types. The control unit can be carried to the target and backer frames by one man.

The system requires a DC motor because the backers must change direction quickly, and without delay. The backers move 10" per minute, then reverses direction, and scoots back. It would seem that this would cause doubles in the backer, but by golly it doesn't! Keep in mind that the backer is moving .060" per second, and the backer changing direction is done in one second. I looked at a mess of backers, and there were quite a pile of them after a five day match, and there was no problem with doubles in the backer paper that I could see. It sure eliminates any doubling problem when a shooter elects to blast five shots downrange, on those occasions when he finds a condition that he (thinks he) likes. It looks to me like this backer is the berries! If you are interested in backer systems, next time you are at Kelbly's range, see if you can't twist George's arm to let you take a look at it.

Most Top Ten Wins—4 Years in a Row!

Precision Shooting Survey—1986 through 1989

PRECISION STAINLESS STEEL MATCH TARGET BARRELS

Available in .224, 6MM, 6.5MM, .270, 7MM, .25 and .30 Calibers
also .22 rim fire

Quality Gunsmithing Services
Custom Target and Sporting Rifles

HART
Rifle Barrels, Inc.

For prices and particulars, call or write!

P.O. Box 182, La Fayette, N.Y. 13084 • Phone 315-677-9841 • FAX 677-9610

OFFICIAL SCREAMER NEWS

DOUG REDDING shot an .098 100 yard group at 100 yards in the heavy varmint class at Visalia, California on July 22nd. Doug shot a 6PPC, Hall "M" action, Hart 1-13 twist barrel, Leupold 36X scope, and 28.0 grains of T-32 with Berger 65 grain bullets. The gentleman did his own gunsmithing and stocking.

MIKE VOLK shot an .097 100 yard group at Reed's Run in the heavy varmint class on September 1st. Mike shot a 6PPC, Hall action, Hart barrel, Leupold 36X scope, 27.5 grains of H322 with Euber 68 grain flat base bullets and Federal primers. Fred Sinclair was the gunsmith and stocker.

BILL BRAWAND shot a .174 200 yard group in the sporter class at London, Ontario on August 18th. Bill fired a 6PPC, sleeved XP 100 action, MacLennan barrel, Leupold 40X scope, 28.3 grains of Scott 3032 powder with his own 63 grain bullets, and Federal primers. He did his own gunsmithing, and Bob Adamowicz was the stocker.

HAROLD WOLF shot an .085 group at Visalia, California in the heavy varmint class. Mr. Wolf fired a 6PPC, Stolle Teddy action, Shilen barrel, Lyman-Siebert 36X scope, 30.5 grains of 748 with Iwatsubo 68 grain bullets. Stu Harvey was the gunsmith, and Lee Six the stocker.

EUGENE THOMPSON JR. shot a nice .066 100 yard group in the heavy varmint class at Fairchance on April 21st. He fired a 6PPC, Poff action, Schneider barrel, Leupold 36X scope, 28.0 grains of H322 with Watson 68 grain bullets and Remington 7½ primers. Henry Burhman was the gunsmith and stocker.

JAMES BOETTCHER shot a .325 10 shot group at 200 yards in the unlimited class at Reeds Run on September 2nd. Jim shot a 6PPC, Stolle Polar action, Hart barrel, Leupold 36X scope, 29.0 grains of GI 322 with Hottenstein 68 grain boat-tail bullets and Federal primers. Fred Hasecuster was the gunsmith and stocker. We also understand that two days later, Jim Boettcher noticed that his .2543 grand agg for this weekend was a new NBRSA record. Naturally, without the requisite procedures for a record having been fulfilled, the record was lost. Sorry, Jim, but look at the bright side . . . you convincingly beat Jerry Masker this weekend!

CLAY SPENCER shot a .174 200 yard 10 shot group in the unlimited class at Roanoke, Virginia on September 2nd. Clay shot a 6PPC, XP100 action, Lilja barrel, Leupold 36X scope, 26.5 grains of H322 with 68 grain Fowler bullets and Remington 7½ primers. Clay did his own gunsmithing and stocking.

JOHN GAMMUTO, the sincere-but-struggling assistant editor of this publication, shot an .082 100 yard group at Fairfield, Ohio on September 15th. John fired a 6mm Talldog, with a CPS action, Hart barrel, Leupold 36X scope, 28.8 grains of 322 with Wirthin bullets and Federal primers. Fred Hasecuster was the gunsmith, and the stock work was done by the redoubtable Ike.

KENNETH LEAF shot an .083 100 yard group in the sporter class at Tacoma, Washington on June 30th. Ken fired a 6PPC, sleeved Remington 600 action, Hart barrel, Leupold-Siebert 36X scope, 27.0 grains of T32 with 66 grain Bishop bullets and Federal primers. Fred Sinclair was gunsmith and stocker.

LARRY SCHARNHORST shot a .161 200 yard group at Kelbly's range in the sporter class during the IBS' Nationals. Larry shot a 6PPC, Hall action, Hart 1-13 twist barrel, with a B+L 36X scope. The bullet was the Berger 65, with Federal primers, and Tom Meredith was the stocker. Larry did not tell us the powder charge, and from past experience with this shooter, who has a liking for hot loads . . . maybe it's just as well.

TIM CANTWELL shot a .193 200 yard group at the IBS Nationals in August. Tim shot a 6mm, Stolle action, Hart barrel, Leupold 36X scope, 28.5 grains of T-32 with his own bullets and Federal primers. Speedy Gonzalez was the gunsmith and stocker.

JERRY MASKER shot a .367 200 yard ten shot group in the unlimited class at Reed's Run on August 12th. Jerry shot a 6PPC, Wichita 1375 action, Hart barrel, Lyman-Siebert 40X scope, 29.5 grains of Norma 201 powder with 68 grain Euber bullets and Federal primers. Seely Masker did the gunsmithing for the Bill Hall rain gun. Subsequent to this, Jerry fired another 10 shot 200 yard screamer with this same gun, a .303 at Reed's Run on September 2nd.

LARRY ESTES shot a ten shot, 200 yard group in the heavy bench class at the IBS Nationals at Kelbly's range that measured .335. He fired a 6PPC, Stolle Polar action, Hart barrel, Unerti 36X scope, 29.1 grains of GI 322 with his own 68 grain bullets and Federal primers. Fred Hasecuster was the gunsmith. Then, in the light varmint class, again in the IBS Nationals, Larry fired a .074 100 yard group. Here he fired a 6PPC, Panda action, Lilja barrel, Leupold-Premier 40X scope, 49½ clicks (Culver measure) of T322 with Estes 68 grain bullets ad Federal primers. Fred Hasecuster was the gunsmith, and Charles Dalessandro the stocker.

BUD WELSH shot an .077 100 yard group in the heavy varmint class at Reed's Run on August 11th. He fired a 6PPC, Wichita action, Hart barrel, Leupold 36X scope, with 27.5 grains of T32 with Hollister 68 grain boat-tail bullets and Winchester primers (!). Seely Masker did the gunsmithing.

RANDY LEWIS fired a small one, an .063 to be exact, at Knoxville, Tennessee, in the light varmint class on August 19th. Randy used a 6PPC, Hall "M" action, Hart barrel, Leupold 36X scope, with 27.5 grains of H322 and Watson 68 grain bullets, ignited by Federal primers. James Coffey was the gunsmith as well as stocker.

MILT COOK was at the York, Pa. range on August 4th, when he apparently decided to "bear down" in the sporter class, at 100 yards. On the 4th and 5th relays Milt fired back to back groups of .098 and .099. They may have been the key ele-

JIM GREENAWALT

— CUSTOM PAINTING
— MURALS AND AIR BRUSH WORK
— BOLT IN'S AND GLUE IN'S
— ACTION WORK
— CHAMBER WORK
— BARREL'S FLUTED
— COMPLETE RIFLES BUILT
— POLISHING AND GLASS BEADING

Feel Free to Contact Us for Any of Your Benchrest Needs

JIM GREENAWALT
102 BRANDON RD.
YONKERS, NY 10704
(914) 776-1581

ments in an agg that was range measured as a new sporter 100 yard agg record. Milt shot a 6PPC, H-S Precision barrel, Stolle action, Leupold 36X scope, 28.0 grains of GI 322 with his own 68 grain bullets and Federal primers. Fred Hasecuster was the gunsmith and stocker.

RICH MORTON, at York, Pa., on August 5th shot a 200 yard group in the heavy varmint class that measured .195. Rich shot a 6PPC, Hall "M" action, Lilja barrel, Leupold 36X scope, 28.0 grains of T32 with Watson 68 grain bullets and Federal primers. Clarence Hammonds was the gunsmith and stocker.

DON POWELL fired a 200 yard, ten shot group of .305 in the unlimited class at the Fairchance range on June 17th. Don used a 6PPC, Shilen action, Hart barrel, Leupold 36X scope, 29.0 grains of N201 with 68 grain Berger bullets and Federal primers. Harold Broughton was the gunsmith.

WAYNE LINSENBACH did it the hard way, with a ten shot group that measured 7.187", at 1,000 yards at the Williamsport, Pa. range on July 15th. Wayne shot a .308 Baer, Remington action, Hart barrel, 20X Unertl, 80.0 grains of Old 4831 powder and 220 grain Sierra bullets, and Federal 215 primers. Bruce Baer was the gunsmith and stocker.

BOB FRITZ shot a ten shot 200 yard group at the Tacoma, Washington range on May 27th that measured .350. The group was good enough to win Bob the Sniper King Trophy for 1990. The award is given for the smallest 10 shot group of the year at 200 yards. The trophy was first awarded in 1944, and has a lot of Northwest benchrest history behind it. The gun was an all steel rail gun, built by himself, in 6PPC, with a sleeved Remington 700 action, Hart barrel, Lyman-Siebert 32X scope, 27.0 grains of BR-28 powder and 62 grain Snow bullets with CCI primers. Arnold Erhardt was the smith.

JUDSON PITTMAN shot an .080 group at 100 yards in the heavy varmint class at Fairfield, Ohio on September 16th. He fired a 6mm Talldog, with a CPS action and a Schneider barrel, with a Premier 40X scope. The load was 28.0 grains of T32 with his own 63 grain boat-tail bullets and Federal primers. Fred Hasecuster was the gunsmith, and Judson did his own stock work.

TOM PERIA shot a rather small .062 100 yard group in the sporter class at York, Pa. on August 4th. Tom shot a 6PPC, Wichita action, Leupold 36X scope, Hart barrel, 28.0 grains of GI 322 with Rubright 63 grain bullets and Federal primers. Norm Dixon was the gunsmith and stocker.

DICK GROSBIER, at the Fairchance range, on April 21st, put an .076 group downrange at 100 yards in the heavy varmint class. He shot a 6PPC, Teddy action, Shilen barrel, B&L 36X scope, 29.0 grains of H4895 with 66 grain Fowler bullets and Remington 7½ primers. Clarence Hammonds was the gunsmith, and Tom Meridith the stocker.

BILL PONDER at Fairfield, Ohio on September 16th shot an .097 group at 100 yards in the heavy varmint class. Bill shot a 6PPC, Stolle action, Shilen barrel, Leupold-Premier 40X scope, with 27.3 grains of H322 and Hasecuster 63 grain boat-tail bullets, with Federal primers. Fred Hasecuster was the smith as well as the stocker.

DWIGHT FITZSIMMONS fired a .185 200 yard group in the heavy varmint class at Minnetonka on June 24th. Dwight shot a 6PPC, Stolle action, Lilja barrel, 29.0 grains of GI 322 with 68 grain PCBC bullets and Federal primers. Jerry Simison was the gunsmith, and Tom Meredith the stocker.

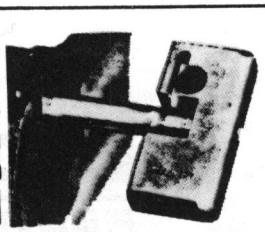
MIKE SICINA, shot a small .065 target at the Fairchance range on September 29th, in the heavy varmint class, at 100 yards. Mike shot a 6PPC, Wichita action, MacLennan barrel, Leupold 36X scope, 28.0 grains of H322 with Euber 68 grain bullets and Federal primers. Norm Dixon was gunsmith and stocker.

GORDON KIRKMAN, also at the Fairchance range, on September 30th shot a .155 group at 200 yards in the heavy varmint class. He fired a 6PPC, Stolle action, Hart barrel, B&L 36X scope, 27.7 grains of 322 with Estes bullets and Federal primers. Fred Hasecuster was the builder of the gun.

SER KEMPNER, at the Holton, Michigan range on September 22nd shot an .087 group at 100 yards in the light varmint class. He shot a 6mm, Stolle action, Hart barrel, Leupold 36X scope, an unspecified load, with Remington 7½ primers. Dan Dowling was the assembling smith and stocker.

JERRY MASKER, who seems to spend half his life applying for official screamer patches, shot a .130 group at 200 yards in the heavy varmint class at Fairchance on September 30th. Jerry shot a 6PPC, Wichita action, Hart barrel, Premier 48X scope, with 27.5 grains of T32 (are we running out of Norma 201, perhaps?) and 68 grain Hollister boat-tail bullets with Federal primers. It is probably no surprise that Seely Masker was the gunsmith.

Turn case necks uniform within .0001



with this Marquart Neck Turning Tool — pilot diameters from .17 to .30 caliber. We specialize in rebarreling and conversions — and CUT-RIFLED barrels, 7mm to .45 caliber. Marquart Precision Co.: Box 1740; Prescott, AZ 86302; (602) 445-5646

PAC-NOR BARRELING

"Your Barreling People"

Pull buttoned, stress relieved and hand lapped chrome-moly and stainless rifle barrels

- Barrel Blanks
- Contoured Blanks
- Prefit Barrels

Most standard & hundreds of wildcat chamberings

For information write or call:

PAC-NOR BARRELING
99299 Overlook Rd. P.O. Box 6188
Brookings, Oregon 97415
Phone (503) 469-7330
24 HR FAX 503 469-7331

PRECISION SIGHT CORRECTIONS

by

Ron Nosack

Here we are in 1990, and after roughly one hundred years of organized target shooting, there are still many unanswered as well as unasked questions regarding iron and scope sight adjustments. Example: On the bench in front of me is a friend's Varmint Special in .25-06. It has a Unertl 32X scope mounted on the factory scope blocks, that have a center to center distance of 12.312 inches. Now how much is a click going to move the point of impact at 100 yards, or at 350 yards??? Tough to figure out isn't it. Our internally adjustable scopes are supposed to be graduated in .250 MOA (minute of angle), or .500 MOA clicks, and yet our drop tables and windage charts are in inches. With iron sights (Redfield), changing the sight radius from its nominal 30 inches, introduces a change in the click value of the sight to something other than .250 inch at 100 yards. How much does one click move your point of impact at various ranges, and what is the proper sight radius to give us a usable increment of movement? This article attempts to shed a little light on the mysteries of sight adjustments.

After much head scratching, plus some help from E.C. Crossman's "Small Bore Rifle Shooting" (1927), I developed three spreadsheets that will help us to make precise sight corrections. Well . . ., at least as precise as our systems will allow. The spreadsheets are identified as such: chart 1 is MOA scopes, chart 2 is INCH scopes, and chart 3 is IRONS.

First off, let us *assume* that your scope clicks are true .250 MOA (.2618 inch at 100 yards). To use the MOA scope chart (chart 1), all you have to know is the range, the amount of error, and be using a scope with .250 MOA clicks. Find the correct range at the left side of the chart, and the amount of the error at the top of one of the columns. Where the two intersect is the amount to correct, in clicks. If the amount of error is more than 10 inches, for instance 14 inches, then add the correction in the 4 inch column to the correction in the 10 inch column. Simple. Some people say that there is not that much difference between .250 MOA clicks and .250 inch clicks, but it does make quite a difference under circumstances that involve long range, and a lot of correction. For example: Let's say we have a .308 Win. (168 MK @ 2600 fps.) zeroed at 200 yards, and we want to put on elevation for 1000 yards. The Sierra book says that we must correct for 403.73 inches. If we assume .250 inch clicks at 100 yards (2.5 inches at 1000 yards) then the correction equals 161.5 clicks. But if we assume MOA clicks (2.62 inches at 1000 yards), then we correct 154 clicks. That's a difference of 7.3 clicks, or about 19 inches. At a shorter range of 600 yards, and with 10 inches of correction needed, the difference between .250 MOA and .250 inch clicks only amounts to about a .3 of a click.

The brochure that came with my 24X Leupold scope states that the clicks are .250 MOA. If they say so, then it must be true. After all, they're the "factory." However, in the interest of accuracy I wrote to both Leupold and Redfield's engineering departments and asked them if their

Congratulations

JEFF GOTTSHALL
for his wins at the
Iowa State Varmint Championships.
1st LV - 100 yards
1st LB - 200 yards
LV Grand Agg.
HV 100 yards
HV Grand Agg.
2 Gun Agg.

FRANCOIS LECOURT
for his win at the
100-200 Meter Arena Cup,
1990 Frejus Cote D'Azar
Championships
with a .2988″ agg.

SEELY MASKER

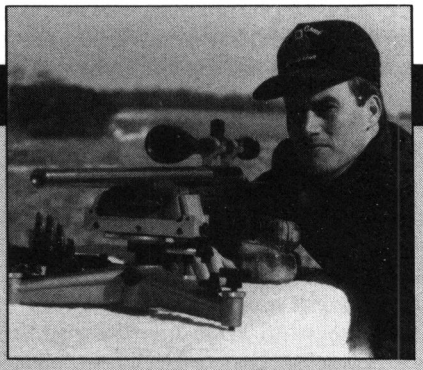
Rebarreling — Rechambering — Restocking

CUSTOM RIFLES

54 Woodshire South
Getzville, New York 14068
Phone (716) 689-8894
Send $1.00 for brochure.

Match-Grade Performance

IBS BENCHREST RECORD



.319″ @ 300 yds.

Union County, PA.

Jack Sutton, La Fayette, New York, shot an unprecedented .319″ group on June 18, 1988 to capture the current IBS 300 yard light varmint record.

Records are not broken by accident. Precision accuracy of this magnitude is accomplished only by those dedicated to perfection, where no detail is too small in the quest for accuracy.

Jack Sutton of Hart Rifle Barrels, believes in that philosophy both in his barrel making and in the products he uses.

He didn't choose his Redding powder measure by accident either. The Redding #3BR Match Grade Powder Measure allows demanding shooters like Jack Sutton to achieve unparalleled precision and repeatability right out of the box with no modification whatsoever.

SAECO

REDDING

RELOADING EQUIPMENT

1089 Starr Rd., Cortland, NY 13045

CHART 1

SCOPE SIGHT CORRECTION CHART (m.o.a.) — R. Nosack

Enter beginning yardage -----) 50 yds.
Enter increment steps -------) 50 yds.
Enter click value (m.o.a.) --) 0.250 m.o.a

02/10/90 date (created
09/20/90 date (printed
222.5 days (elapsed

Each click is worth....	Enter Error.. 1 inch — clicks to correct	Enter Error.. 2 inches — clicks to correct	Enter Error.. 4 inches — clicks to correct	Enter Error.. 6 inches — clicks to correct	Enter Error.. 8 inches — clicks to correct	Enter Error.. 10 inches — clicks to correct
0.131 in. at 50 yds	7.6	15.3	30.6	45.8	61.1	76.4
0.262 in. at 100 yds	3.8	7.6	15.3	22.9	30.6	38.2
0.393 in. at 150 yds	2.5	5.1	10.2	15.3	20.4	25.5
0.524 in. at 200 yds	1.9	3.8	7.6	11.5	15.3	19.1
0.655 in. at 250 yds	1.5	3.1	6.1	9.2	12.2	15.3
0.785 in. at 300 yds	1.3	2.5	5.1	7.6	10.2	12.7
0.916 in. at 350 yds	1.1	2.2	4.4	6.5	8.7	10.9
1.047 in. at 400 yds	1.0	1.9	3.8	5.7	7.6	9.5
1.178 in. at 450 yds	0.8	1.7	3.4	5.1	6.8	8.5
1.309 in. at 500 yds	0.8	1.5	3.1	4.6	6.1	7.6
1.440 in. at 550 yds	0.7	1.4	2.8	4.2	5.6	6.9
1.571 in. at 600 yds	0.6	1.3	2.5	3.8	5.1	6.4
1.702 in. at 650 yds	0.6	1.2	2.4	3.5	4.7	5.9
1.833 in. at 700 yds	0.5	1.1	2.2	3.3	4.4	5.5
1.964 in. at 750 yds	0.5	1.0	2.0	3.1	4.1	5.1
2.094 in. at 800 yds	0.5	1.0	1.9	2.9	3.8	4.8
2.225 in. at 850 yds	0.4	0.9	1.8	2.7	3.6	4.5
2.356 in. at 900 yds	0.4	0.8	1.7	2.5	3.4	4.2
2.487 in. at 950 yds	0.4	0.8	1.6	2.4	3.2	4.0
2.618 in. at 1000 yds	0.4	0.8	1.5	2.3	3.1	3.8

CHART 2

SCOPE SIGHT CORRECTION CHART (inches)

Enter beginning yardage -----) 50 yds.
Enter increment steps -------) 50 yds.
Enter click value (.000) ----) 0.385 inch

24X Leupold (K220815)

Each click is worth....	Enter Error.. 1 inch — clicks to correct	Enter Error.. 2 inches — clicks to correct	Enter Error.. 4 inches — clicks to correct	Enter Error.. 6 inches — clicks to correct	Enter Error.. 8 inches — clicks to correct	Enter Error.. 10 inches — clicks to correct
0.193 in. at 50 yds	5.2	10.4	20.8	31.2	41.6	51.9
0.385 in. at 100 yds	2.6	5.2	10.4	15.6	20.8	26.0
0.578 in. at 150 yds	1.7	3.5	6.9	10.4	13.9	17.3
0.770 in. at 200 yds	1.3	2.6	5.2	7.8	10.4	13.0
0.963 in. at 250 yds	1.0	2.1	4.2	6.2	8.3	10.4
1.155 in. at 300 yds	0.9	1.7	3.5	5.2	6.9	8.7
1.348 in. at 350 yds	0.7	1.5	3.0	4.5	5.9	7.4
1.540 in. at 400 yds	0.6	1.3	2.6	3.9	5.2	6.5
1.733 in. at 450 yds	0.6	1.2	2.3	3.5	4.6	5.8
1.925 in. at 500 yds	0.5	1.0	2.1	3.1	4.2	5.2
2.118 in. at 550 yds	0.5	0.9	1.9	2.8	3.8	4.7
2.310 in. at 600 yds	0.4	0.9	1.7	2.6	3.5	4.3
2.503 in. at 650 yds	0.4	0.8	1.6	2.4	3.2	4.0
2.695 in. at 700 yds	0.4	0.7	1.5	2.2	3.0	3.7
2.888 in. at 750 yds	0.3	0.7	1.4	2.1	2.8	3.5
3.080 in. at 800 yds	0.3	0.6	1.3	1.9	2.6	3.2
3.273 in. at 850 yds	0.3	0.6	1.2	1.8	2.4	3.1
3.465 in. at 900 yds	0.3	0.6	1.2	1.7	2.3	2.9
3.658 in. at 950 yds	0.3	0.5	1.1	1.6	2.2	2.7
3.850 in. at 1000 yds	0.3	0.5	1.0	1.6	2.1	2.6

CHART 3

IRON SIGHT CORRECTION CHART — R. Nosack

Enter beginning yardage ---)	100 yds.	M1A NM/2A Sight	02/10/90 date (created
Enter increment steps -----)	50 yds.		09/20/90 date (printed
Enter sight radius --------)	26.75 inches		222.5 days (elapsed
Enter click value (.000) --)	0.0039 inch		

Each click is worth....	Enter Error.. 2 inches clicks to correct	Enter Error.. 4 inches clicks to correct	Enter Error.. 6 inches clicks to correct	Enter Error.. 8 inches clicks to correct	Enter Error.. 10 inches clicks to correct	Enter Error.. 12 inches clicks to correct
0.526 in. at 100 yds	3.8	7.6	11.4	15.2	19.0	22.8
0.789 in. at 150 yds	2.5	5.1	7.6	10.1	12.7	15.2
1.051 in. at 200 yds	1.9	3.8	5.7	7.6	9.5	11.4
1.314 in. at 250 yds	1.5	3.0	4.6	6.1	7.6	9.1
1.577 in. at 300 yds	1.3	2.5	3.8	5.1	6.3	7.6
1.840 in. at 350 yds	1.1	2.2	3.3	4.3	5.4	6.5
2.103 in. at 400 yds	1.0	1.9	2.9	3.8	4.8	5.7
2.366 in. at 450 yds	0.8	1.7	2.5	3.4	4.2	5.1
2.629 in. at 500 yds	0.8	1.5	2.3	3.0	3.8	4.6
2.891 in. at 550 yds	0.7	1.4	2.1	2.8	3.5	4.2
3.154 in. at 600 yds	0.6	1.3	1.9	2.5	3.2	3.8
3.417 in. at 650 yds	0.6	1.2	1.8	2.3	2.9	3.5
3.680 in. at 700 yds	0.5	1.1	1.6	2.2	2.7	3.3
3.943 in. at 750 yds	0.5	1.0	1.5	2.0	2.5	3.0
4.206 in. at 800 yds	0.5	1.0	1.4	1.9	2.4	2.9
4.468 in. at 850 yds	0.4	0.9	1.3	1.8	2.2	2.7
4.731 in. at 900 yds	0.4	0.8	1.3	1.7	2.1	2.5
4.994 in. at 950 yds	0.4	0.8	1.2	1.6	2.0	2.4
5.257 in. at 1000 yds	0.4	0.8	1.1	1.5	1.9	2.3

clicks were .250 inch, or true .250 MOA (.262 inch) at 100 yards. I sent each a SASE two months ago, but have not received a reply yet. To prove to myself the true value of the clicks, a simple test was devised. If one click changes the point of impact .262 inch at 100 yards, then one hundred clicks should change it 26.2 inches. I set out a tall piece of cardboard, drew a vertical line, and made it plumb. I put an intersecting horizontal line at the top, and another twenty-six inches down. I measured exactly 300 feet from the target and set a tripod-mounted 24X Leupold scope (K220815) so that the scope turret was at the 300 foot mark. With the horizontal crosshair aligned on the top intersecting line of the cardboard, I clicked "UP" 100 clicks which should drop the crosshair about 26 inches on the target. Well, that is not what happened. The crosshair dropped 38.5 inches down from the top line. The process was repeated several times to make sure that my setup was rigid. The point of impact change is not anywhere near the stated .262 inch per click, but instead it's .385 inch per click (approx. 3/8 inch). If the crosshairs move 38.5 inches for 100 clicks the value of each click is found by dividing 38.5 by 100, (.385 inch per click at 100 yards). To give you an idea of the difference this can make: at 200 yards and with 4 inches of error, the difference in correction is sixteen .250 MOA clicks, versus eleven (.385 inch) clicks. The next day the test was repeated with a different 24X Leupold (692189), with almost the same results (37 inches movement). Just recently, while zeroing a rifle at 200 yards I over-corrected badly, and I remember sitting there for a while trying to justify what had happened. It just didn't dawn on me to question my scope for honesty.

In a recent issue of P.S., Doug James said his real world job is to *"question everything, check everything, and assume nothing."* Those are certainly wise words to follow in our shooting sports. Why are the clicks so far off from the stated value? Is the same mechanism used in all the tar-

THE BOB PEASE COLLECTIONS,

are spiral bound booklets on accuracy rifle shooting. Written expressly to help guide you on bedding, accurizing, case preparation, neck turning, rifle preparation, scoping, loading and shooting techniques for rifle accuracy. All four volumes are fully indexed and provided with Tables of Content. Vol. I, Vol. II, Vol. III and the NEWEST ONE Volume IV are $6.00 each plus $1 first class postage per volume. ALL FOUR booklets are total $27 prepaid. Bob Pease Accuracy, POB 310787, New Braunfels, TX 78131-0787.

RORSCHACH CARBIDE DIES

$1.00 for brochure

Rorschach Precision Products
Box 151613
Irving, Tx. 75015

DAVIDSON PRODUCTS FOR SHOOTERS

Action sleeves, barrel changers, bolt plugs.
Bases for Kelbly rings, seating depth checkers.

Send for brochure of these and other items.

A.L. DAVIDSON
2020 Huntington Dr.
Las Cruces, N.M. 88001

get scopes, even though they may have different tube lengths and optical powers? Charts 1 and 2 show the difference between a true .250 MOA scope and the actual performance of one of my Leupold's. Don't rely on chart 1 unless you prove to yourself that it fits your scopes true calibrations. The lesson is . . . to NEVER trust your scope's clicks before you prove them to yourself.

I'm also including a chart for the M1A NM/2A sight (chart 3). Its windage screw has 64 threads per inch and there are four clicks per one revolution of the windage knob, so that gives an aperture movement of .0039 inch per click. The evaluation clicks work by a different principle but are very close to the same figure, so one chart works for both. To find the theoretical movement per click, first divide the number of threads per inch into 1. The resulting figure is the amount of aperture movement per one full revolution. Now divide that figure by the number of clicks in one revolution. Use the M1A figures from above: (1/64)/4 = .0039 per click. This spreadsheet will also work correctly with a Unertl type scope, because it obeys the same laws as do iron sights.

Looking down the 1 inch error column, you will notice that the clicks-to-correct apper to be the same for several different yardages. I formatted for one decimal place and in doing so, some of the clicks get rounded off to the same number. You can be assured that if I formatted them out several more places every entry would be different. At the left side of each chart is a scale which tells exactly how much each click is worth at the various ranges.

Here are a few odd facts which may be of interest:

For Redfield type iron sights that have .00208 movement per click, the correct inter-sight distance should be 30.00 inches to give exact .250 inch at 100 yard, and 2.5 inches at 1000 yard corrections. For a MOA setup the inter-sight distance would be 28.65 inches. To set up Unertl scopes for true .250 inch at 100 yd clicks, use 7.20 inches between the centers, and for MOA clicks use 6.875 inches between centers. With an inter-mount distance of 10.800 inches, we have 6 clicks at 100 yards to move 1 inch. Each click will equal .167 inch. Since wind charts and drop charts are in inches, I think that's the way we should set up our sights if we have a choice. Recently, I have seen reference that a minute of angle is 1.0476 inches, but that isn't quite correct. The true figure is 1.0471976xxx which rounds off to 1.0472. Sight movement per click: Anschutz = .0015, Redfield = .00208, Unertl rear mount = .0005.

I will be happy to make custom charts for anyone who is interested. For iron sights or Unertl type scopes I'll need the exact distance between the sights, or mounts, and the aperture movement per click in thousandths. Use a dial indicator to get an average of at least 20 clicks. If a dial indicator is not available, then furnishing me with the number of threads per inch, and the number of clicks per revolution of the adjustment knob will tell me what I need to know. If you have an internally adjustable scope, repeat the test that I did and send me the crosshair movement per click at 100 yards. Use a measured 100 yards (don't assume). Sandbag the rifle heavily, so that things are as solid as possible, and run the crosshairs up and down a couple of times to make sure that your figure is valid to within a half inch or so. One of my scopes has one click of backlash, so keep that in mind when you do your strings of 100 clicks. If the amount of error in each column, the increment steps, or the maximum range isn't suitable for your type of shooting, I can easily change them to whatever is desired. I'll also need a SASE and $2.00. For the $2.00 I'll make several different charts if I'm supplied alternative values.

THROAT DOPING FOR SPECIAL REAMERS

1. SEAT BULLET AS DESIRED.
2. IF YOU CHOOSE 1 MIN. 30 DEG. (3 DEGREE INCLUDED), SELECT A DATUM ABOUT .002" UNDER GROOVE DIAMETER.
3. NEXT, SET AND LOCK YOUR MICROMETER AND MAKE A SCRATCH ON THE OGIVE.
4. MEASURE FROM THE HEAD TO THE SCRATCH.
5. FOR STEEPER ANGLES USE .004" UNDER GROOVE FOR DATUM REFERENCE LINE.

BY KEITH FRANCIS OF JGS

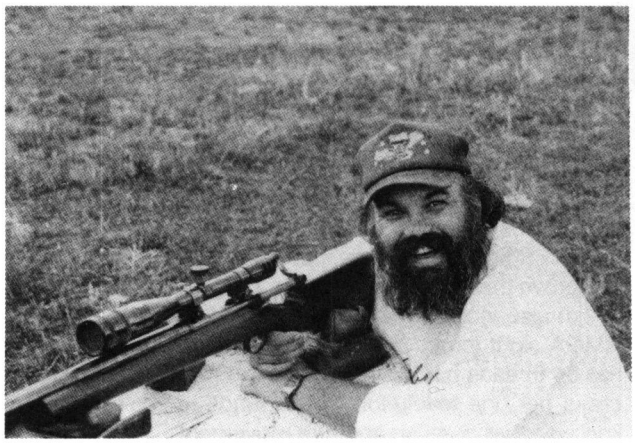
JJG 90

1990 Coors Schuetzenfest Nationals

Part II: Past the Scores to the Real Stories

by

Rich Kayser



There are two very separate and distinct groups at the Coors Matches, the traditionalists and the modern equipment guys.

Proponents of the "traditional look" generally favor the Ballard, Stevens 44½ variations (including the one currently in production by Paul Shuttleworth in Pennsylvania), and the Winchester Hi-Wall actions as a basis for building rifles. A surprising number of the rifles being shot were original but, sadly for lovers of the Pope and other customs, the number goes down yearly due to the rising value to collectors. These three all feature external hammers and doubleset triggers, although Conrad Grims (of Golden) was conspicuous on the firing line with his handmade, updated version of the Ballard with a striker-block (internal hammer) conversion.

Among the modern designs in evidence the Miller-DeHaas by far outranks the rest, by sheer numbers, if not inherent accuracy of design. One was used by this year's winner, as well as many of the serious competitors. It's main rival seems to be the Hoch action formerly made by its inventor Richard Hoch, but recently sold to one of my neighbors, Steve Meacham in Craigmont, Idaho. Out in the West anybody within 300 miles is a "neighbor," and Craigmont is well within that boundary. I am going to try and get up for a visit this fall before elk hunting season for a tour of the shop and a chance to talk singleshot rifles.

Of all the actions in use at the Coors Schuetzenfest, the Ruger seems to generate the most vocal response. I heard everything from Roger Johnston's opinion that "with a decent trigger it can win this match" to a rather pithy "better your mother behind bars than your father behind a Ruger." Most of the people I spoke with felt that the game owes much to Bill Ruger for revitalizing the single shot rifle as a hunting/shooting tool, but that it could have been a more target-oriented design.

While a large number of shooters echoed the sentiments of Ron Long (the noted Denver Gunsmith and Shooter) that "until somebody beats me with something better . . . I'll stick with breech-seated bullets in a .32-40", fully one-half of the riflemen at the Schuetzenfest this year were shooting something else. Some like Charlie Dell (who made the long drive from Christiansburg, VA with his dog "Maggie" to compete) feel a shorter case like his .333 Kurtz, a .32-40X1.5" with its higher density loading may give better (read more consistent) performance.

Roger Johnston (Merrill Martin's fellow experimenter) has carried this small case theory a step closer to modern-day loading practices, choosing to compete with "fixed ammunition" (an old Schuetzen euphemism for conventionally prepared rounds). Roger does operate on the periphery of the single shot rifle world: some say the "leading edge," others say "lunatic fringe." When I talked with Roger about this, he himself was not sure, and doesn't seem to care. He does believe that pre-loading 200 rounds of the 30-30X1.5" he shoots lets him do a lot more shooting to check wind/mirage conditions during a relay. Remember that these are sub-1400fps cast bullet loads, and that the cumulative effect of 20,000 rounds is a polishing of the barrel. If and when a condition is identified Roger can put hit 10 rounds downrange in the 45-60 seconds that it takes a fire and reload a breech-seated round. Roger and Merrill's work with tumbling bullets in various mixtures in an attempt to "shotpeen" them and impregnate them with lubes has been well documented in past issues of PS, so I'll skip any detailed description of that process.

Roger's scores from this year's matches tend to support some of his claims, but some equipment problems relegated him to a 52nd place finish. There may be some consolation in the match reports for Roger. A strong showing in the two benchrest stages, with a 4th place 1199-12C in the scope segment, and a 5th place 1190-12 with iron sights had left Roger in 3rd place in the BR aggregate. Had he been able to compete in the fourth leg of the Nationals (scope offhand) his total of 3246-24C in the first three phases of competition might have given him a chance at a Top Ten finish.

With regard to the breechseated versus fixed question, everyone seems to be in agreement that breechseating does produce more consistent accuracy. The exact fit of the bullet to the throat eliminates the most serious detriment to accuracy, the jump into the rifling. A conventional loaded round must travel from case to throat to bore. During his transition, it ends up being swaged from "as cast" size to throat size, then back down to bore diameter. This up and down sequence seems to affect the bullet in ways we have not yet been able to quantify. All we know is that it is not consistent in its affect. A bullet breechseated into the throat is in place, and with the taper into the rifling seems not to have to change dimensions much. I am not sure why, other than what I have said here, but it is more accurate and consistently so at this point.

With the given that most of the rifles at Golden are capable of shooting "clean" targets off the bench (iron sights or scope), it is soon obvious that the match will be won or lost with offhand scores. For those unfamiliar with the Coors matches, there are four stages, 50 shots are fired, a 10 shot string on each target. The four matches are: Bench iron and scope sights' and Offhand iron and scope. About 100 years ago H.M. Pope was supposed to have said that "the bench proves the rifle, offhand proves the man." At Golden this year the Top 100 averaged 1201/1193 (I/S) from the bench and 1049/1082 (I/S) offhand.

The following paragraphs cover some of the more interesting competitors I had the chance to talk with at the Coors matches.

Jim Feren, who won the Coors Championship for an unheralded 6th straight year, came into the game from Hi-Power Rifle Silhouette shooting; where he was also a national champion. Jim is the consummate offhand shooter, his four match scores were 1221-25C and 1217-26C from the bench, 1082-C and 1129-12C offhand. In talking with Jim he mentioned that he may dryfire as many as 35,000 times a year offhand, working to maintain that consistent sight picture and letoff.

Ron Long: renaissance craftsman. out of his small shop in Denver Colorado, Ron Long produces singleshot rifles that can best be described as artwork. One of the few men involved in gunsmithing that have actually made the barrel, and complete action, as well as doing the assembly work and stocking. Ron shot this year with a Sharps Borchardt doubleset trigger schuetzen rifle. Sharps never made one with doublesets, Ron Long built this one from scratch, using his own trigger design. It is pictured somewhere in this article. It is unfortunate that my photos (B&W) cannot show the exquisite color range of the casehardening.

Dean Miller Patriarch of the Miller Clan, and the builder of the de Haas-Miller singleshot rifle actions that have dominated the Coors matches over recent years. Dean was kind enough to share his thoughts on Schuetzen-style rifle shooting, the action that bears his name, and how it all came about. Dean has just retired from a career as a rural mail carrier, and the Miller actions will be a full-time job now, along with a few completed rifles.

The DeHaas-Miller action exists today due to a chance meeting between Frank de Haas and Dean Miller at a a gunshow in the late sixties. The two discovered a mutual interest in singleshot rifles, and pooled ideas on creating the ultimate modern action. The design they finalized was patented, and it has proven to have the accuracy potential striven for.

I have included a line drawing by Dean's son Cyle Miller of the action. As you can see, it is an extremely simple design, with a minimum of parts. Somewhere I have also included a couple of photos of the action disassembled. It took Cyle Miller about 30 seconds to take it completely apart, and just over 3 minutes to reassemble it. I honestly think even our Esteemed Editor could dis and re-assemble one of the Miller actions without having any left-over parts or problems.

No less a personage than George Fullmer has built rifles around the Miller actions, and his comments are reproduced here. "It has been a REAL PLEASURE to work on these two actions . . . it is the FINEST Falling Block Action ever seen in here (Fullmer's shop). Every part of it would have had the Old Timers sitting up and taking notice. All PARTS are as a conventional Schuetzen Rifle has been made . . . NOTHING FREAKY . . . Just Better." There isn't much I can add to that, except to say that I want one . . . real bad!

One real good way to spend a buck is writing to Dean Miller at PO Box 260, St. Onge, South Dakota, 57779-0260 and picking up a copy of his booklet on the de Haas-Miller actions. It has about 40 pages of information on the action, and singleshot rifles.

There is a picture of Fred Saltus with his two Miller-actioned Coors rifles in here somewhere. It illustrates the difference between the traditional Schuetzen styling, and the modern look. I leave it to you all to draw your own conclusions about style, since both shoot better than the owner can hold them.

I promised you all a comparison of Schuetzen (and the matches behind held under the aegis of the Cast Bullet Assn) matches, and the current BenchRest program; and here it is. In a nutshell for those readers not into a page of statistics, it will cost you about two-thirds as much to have a state of the art rifle built, buy all of the necessary accessories, and compete in either the Schuetzen-style or CBA matches for a year as it does to shoot group-type BenchRest. After your initial foray into the cast bullet world, your yearly costs will be about 1/4th the cost of jacketed bullet competition. It will, however, cost quite a bit more of your time and effort to become competitive. There are a great deal more choices available to the cast bullet shooter, and many more steps to be taken on the road to precision shooting. Steps you have to take yourself, and skills you have to master . . . like casting good bullets.

From reading Merrill Martin's Warren Greatbach's articles in PS most of you have come to see the amount of work that it takes to cast good bullets. We take for granted the precision quality and the uniformity of jacketed bullets made by the custom bullet makers. casting your own is more of an art than a science. A bullet lube has to be found that works in your rifle, with your load, for the weather conditions at wherever you compete. When I got to Golden, I was a little taken aback to see most of the competitors carry a small cooler up to the line. I know that coors sponsors the matches, and that the German Schuetzenfest tradition requires copious quantities of cold beer, but on the firing line? It turns out that many of the bullet lubes are a bit runny at high tem-

$219.95
(plus shipping)
bracket optional

WITH NEW SKYSCREENS

"...it's the best I've seen and the price is right"
Rick Jamison, Shooting Times

Our new **MK5 Professional Skyscreens** combine unparalleled ease of use, quality construction and one of the **widest shooting areas** in the business into a very affordable package.

Each time you fire a round over the PC's Professional Skyscreens your shot number, velocity and average velocity are instantly displayed on our state of the art **32 character display.** When you complete your string the PC will provide you with a **complete** statistical summary. In addition, **each shot** can be individually recalled from memory.

Have us install our optional **Print Driver** ($25) and purchase our **battery powered printer** ($125) and you'll find yourself in possession of the **ultimate chronograph system.** At the end of each string the PC will give you the option of printing **all** of the data for that string, eliminating the tedious job of having to write out each shot's velocity for your records.

The PACT PC is only sold factory direct and is backed by our 30 day **money back guarantee** and limited **lifetime warranty.** Compare our chronograph and skyscreens feature for feature and dollar for dollar with our competitors. You'll find that the PACT PC provides more honest "**bang for the buck**" than **any** other chronograph on the market.

Call toll free **800-722-8462.** VISA, MC and COD orders welcome.

PACT

P. O. Box 531525
Grand Prairie, TX 75053
(in TX 214-641-0049) FAX 214-641-2641

peratures, so they are kept in a cooler until they are loaded (breechseated). The few daring souls that used "fixed" ammunition carried theirs in conventional MTM ammo caddies, just like normal people.

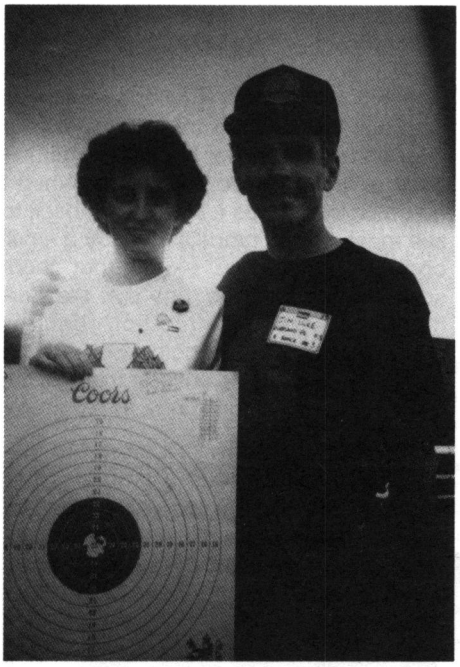
Plans for the 1991 Coors Schuetzenfest program include the 10th anniversary match in Golden next August and an expanded regional format with matches in Europe possible next year. For additional information contact George Valuck at (303) 277-6555 or write to Coors Brewing Company, NH320, Golden, Colorado 80401. I wouldn't miss it for the world, Now if I can just convince Lorene that I need a good singleshot rifle. . .

As an addition to the match scores at the 1990 Coors Nationals Schuetzenfest, I would like to mention the winner of the Ladies Match. Roberta Luke, shown in the accompanying photograph with her coach (and husband, Jim) and the winning target. Roberta shot a new record score of 249, and the first shot for score was the 24. It missed being a 25 by thirty-thousandths of an inch!

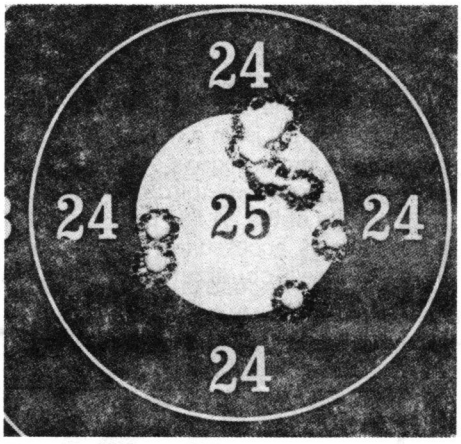
I would have placed 100% of the blame on poor coaching myself, but Roberta is probably too nice a person to put that weighty a load on anybody's shoulders. Besides, it gives her something to shoot for next year. It will be interesting to see if she gets to shoot with the ladies anymore. Just as long as she stays away from the Media and Celebrity Matches.

Roberta Luke shot her bench match with a Ballard action, using a .33-47 chambered Ron Long barrel. The bullet was a 225 grain Long .338" design, propelled by 15.6 gr of Hodgdons' H110.

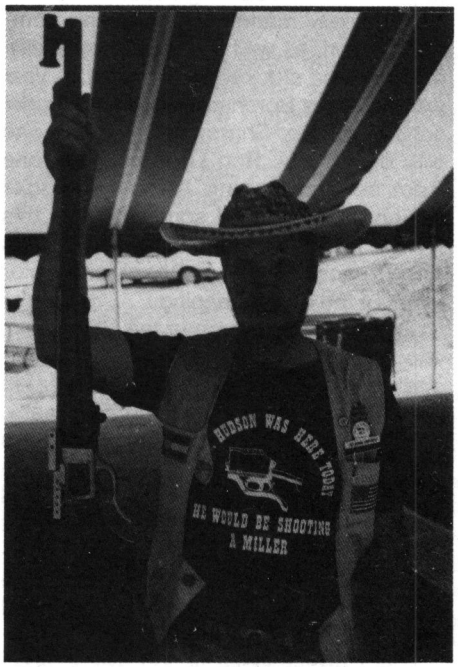
It is an amazing thing to me, to see the scores turned in using a plainbase bullet, fired out of a singleshot rifle at 1400fps. Most of the rifles shot at the Coors matches are capable of shooting a one-inch 10-shot group at 200 yards. Amazing. . . .



Roberta and Jim Luke, shown with Roberta's winning target from the Ladies Match. Roberta scored a new Record 249, and missed a perfect 250 score by .030". Better luck next year!



The target Roberta Luke shot merits a close look. The hole at 12:02 is the one that cost her the perfect 250.



Neal Rice, shown with one of the Miller action rifles he builds. Neal makes the triggers on the Miller action. The T-shirt reads "If Dr. Hudson was here today he would be shooting a Miller."

These are the medallions presented to the top place finishers in each of the four matches and the overall. the rifle is a Winchester HiWall that Ron Long crafted for the winner. It is stocked for hunting, and is chambered for the .38-55 cartridge.

BALD EAGLE PRECISION MACHINE COMPANY

The New

Bald Eagle Rear Bag

30.00

(Plus Shipping)

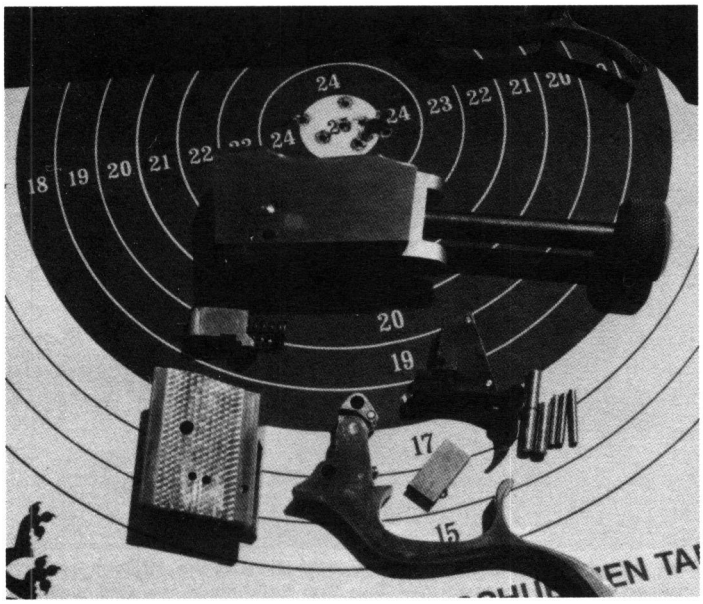
BALD EAGLE PRECISION MACHINE CO.

101 Allison Street • Lock Haven, Pa. 17745
Phone: (717) 748-6772 / 2074
FAX: (717) 748-4443

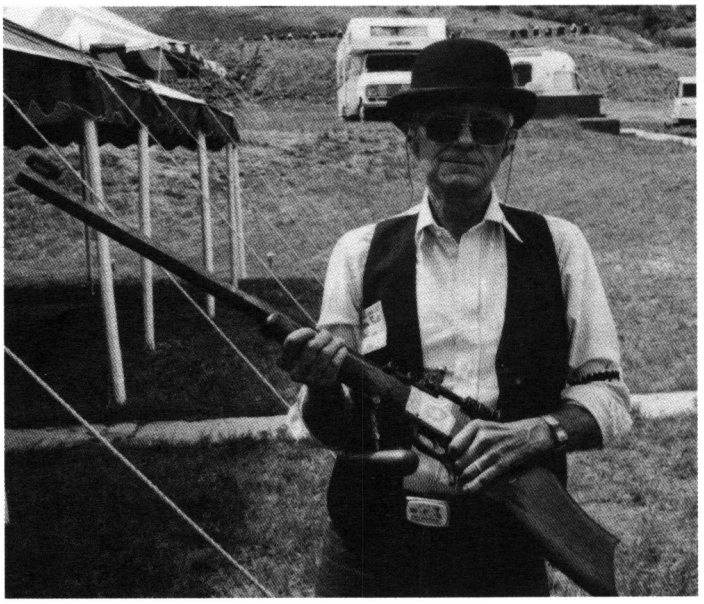
BILL GEBHARDT
NRA Endowment Member
IBS Life Member / NBRSA Annual Member

The firing line at the Coors Schuetzen Nationals.

Fred Saltus with his two Miller competition rifles. "The Good, The Bad, and The Ugly."

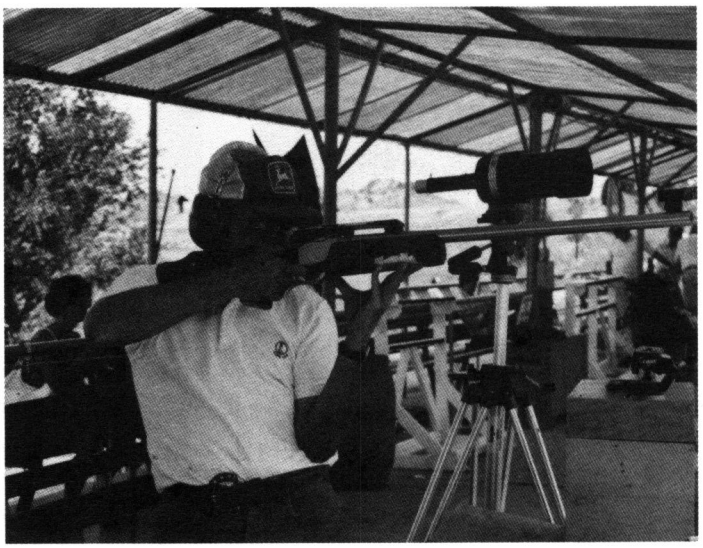


Jim Feren, 1990 Coors Nats Champion.This is the Miller action, disassembled. The target is one fired at the Nats by its' creator Dean Miller. Note the small number of parts and the use of pushpins.



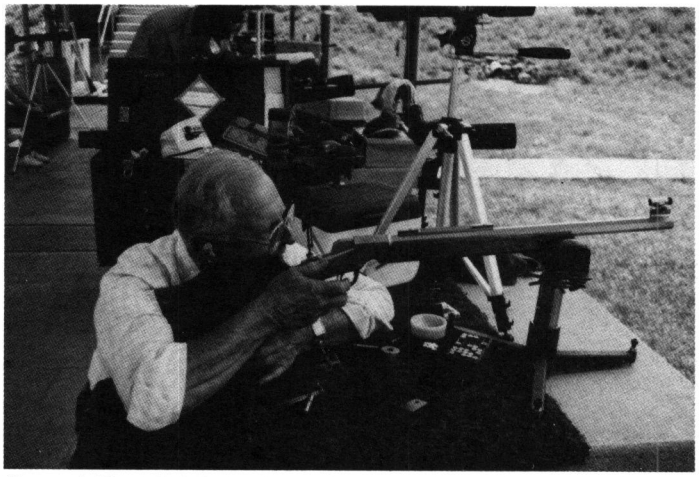
Dean Miller, Schuetzen Competitor, action builder, and all around nice human being. The rifle shown is an offhand stocked one.

Dean again, with the rifle in schuetzen position.



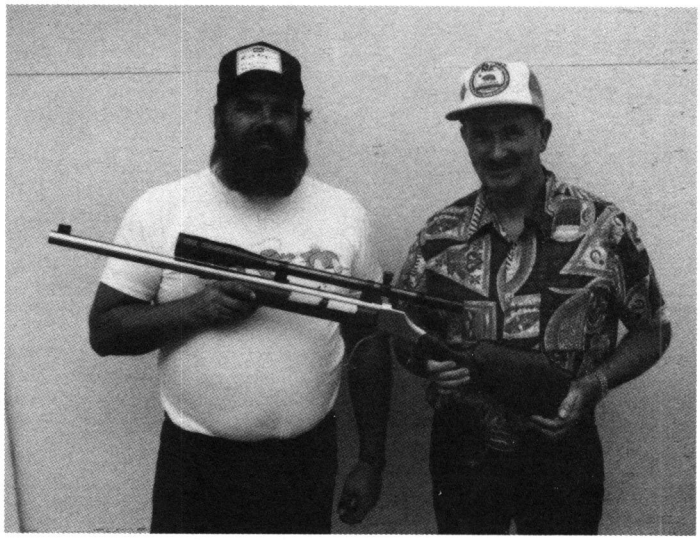
Jim Feren, 1990 Coors Nats Champion.

Ron Long with his handmade Sharps Borchardt, complete with doubleset triggers.

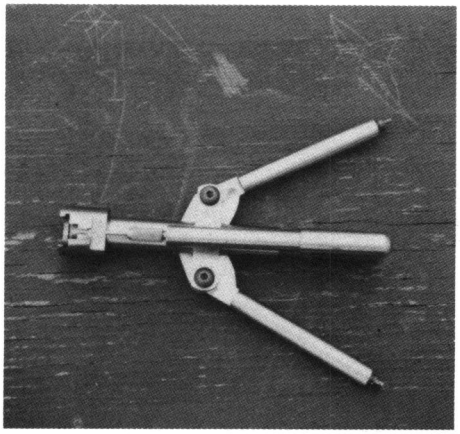


Conrad "Connie" Grims, of Golden, CO, shooting another home-made rifle. This one is a Ballard, with a striker-block conversion.

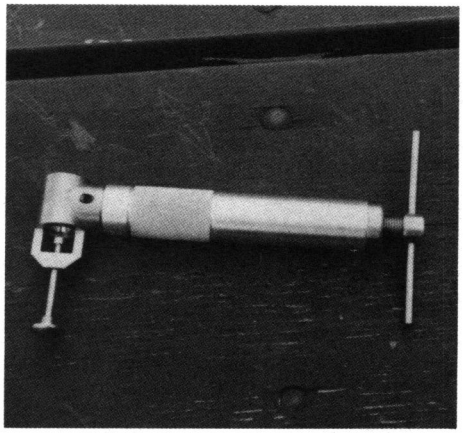
Another shot of the line. I also lost this competitors' name.



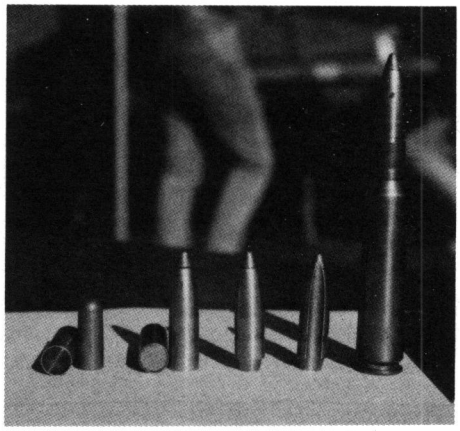
Yours truly, with David Purcell and the Clerke HiWall he has steered to three consecutive Top Ten finishes at the Coors Nats. Interestingly enough, David picked up his Miller action at this years' matches, and will be competing with it in 1991.



This is a nifty "widget," this one made by Charlie Dell. It is also a Pope-style recreation, this one a bullet luber. It lubricates the bullet without sizing it.

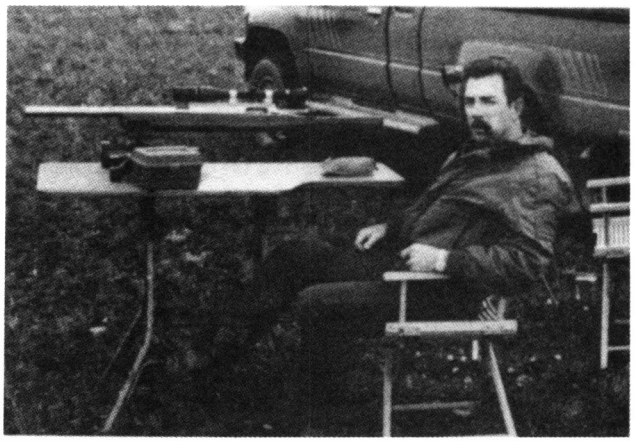


Another "widget," this one made by Charlie Dell. It is also a Pope-style recreation, this one a bullet luber. It lubricates the bullet without sizing it.



Just so you don't get the impression that all these guys do is shoot Coors-type matches, this is one of Conrad Grims' others projects. He shoots a .50 BMG, and makes his own spitzer softpoint bullets. No, he doesn't have any for sale.

BOYD MACE



We are in Montana, Zortman, Montana to be exact. (Editor: Why?) It is five o'clock in the morning.

The alarm clock goes off with that horrid electronic beeping that sets my teeth on edge. With some difficulty I manage to shut the thing off. Across the room the Old Fart sits bolt upright and throws back the blankets, ready to get up. I have noticed this irritating habit in other people They can't peacefully sleep in but have to get up immediately as if they are afraid they will miss something. Or maybe it's just a guilty conscience from thinking they should be doing something. Or maybe they were having an embarrassing dream.

I glare across the room and slide back under the blankets. The Old Fart stretches contentedly and then noisily passes gas. I am again reminded of the real reason for his nickname.

In resignation I get up and plug in the coffeepot. A thought strikes me and I also open the window. Back under the blankets to catch a few more minutes of shuteye. The smell of the coffee will wake me if the commotion across the room doesn't.

It doesn't work, The Old Fart is determined to keep me awake. He is banging around the cabin gathering up guns and equipment. I get up for good and start fixing breakfast while he loads the pickup. He isn't allowed to cook. It never occurs to him that the entire breakfast should be ready to eat at the same time. I have seen him cook. After the eggs are done he puts on the bacon. After the bacon is done he starts the hashbrowns. It is impossible to get your entire meal at the same time and still be hot.

Breakfast over we climb in the pickup and head out for an early prairie dog shoot. I am sipping on a cup of coffee while the Old Fart bounces the Dodge over potholes. Coffee spills all over my pants. It looks like one of those days.

We stare through the windshield and try to guess which way to go to avoid the rain. In this part of the west it never rains solidly all over but instead just here and there. And generally sideways, too, since rain is always accompanied by strong wind.

We guess wrong. Just as we pull into the edge of the dogtown the rain starts. I have another cup of coffee and snuggle down into the seat for a nap. No use. The Old Fart can't sit still long and is soon banging around inside the cab. I glare at him and he decides to get out and see if the rain is letting up. It is. He yells at me to get moving and set up the bench.

The bench is up, the spotter on its stand and the chairs and other gear arranged. The prairie dogs are coming out and sitting on their burrows looking around at the new world. I find a good target and watch through the spotting scope as The Old Fart kills the dog. Another one is close by and he takes it after a couple of misses. A couple more go down and it is my turn to shoot.

Or it ought to be. The Old Fart is on a roll and doesn't want to give up the bench. Generally we swap off after ten shots since the bore will need cleaning but this time he deliberately miscounts

Prairie Dog News

International Varmint Association

We all share information - where and how. Membership Jan. 1, to Dec. 31, 1989 and start with March issue, $12.00

INTERNATIONAL VARMINT ASSOCIATION

A FOUNDATION FOR THE CONSERVATION OF THE HUNTER AND THE HUNTED

2615 N. Fourth St., #603, Dept. PS,
Coeur d'Alene, Idaho 83814

BERGER BULLETS

.224 Caliber
52-60-62-65 Grain $10.00 per hundred

6mm Caliber
60-62-65
68-80 Grain $10.50 per hundred
105 grain $9.60 per eighty

Distributor for J-4 Jackets

Lead wire in following sizes:
.125-.185-.165-.218-.250-.365
1/2 of one percent antimony
$40.00 per 40 lb. roll
$26.50 per 20 lb. roll

Powder
T32 $70.00 per 8 lb. Container

4234 N. 63rd Avenue
Phoenix, Arizona 85033
Phone 602-846-5791
Fax 602-848-0780

IF YOU ARE IN NEED OF:

Precision Chamber Reamers
Quality Gauges
Special Gunsmith Tooling
HSS Drills, Taps, and other Cutting Tools
LARGE INVENTORY IN STOCK

Contact us for details:

jgs
Precision Tool Mfg.
1-503-267-4331
FAX: 1-503-267-5996

1141 S. Sumner Rd.
Coos Bay, OR 97420

VISA MasterCard

and claims he has only fired six or seven rounds. It is no use arguing with him. Once he gets something fixed in this head it is impossible to shake it loose. Maybe a two by four would do it.

This time I pick out a prairie dog on the far side of the field, maybe 800 yards and crosswind. He stares through the scope and fires. A miss. I call the shot and he tries again. Another miss. I am not surprised since the wind is now howling. He fires again, also misses again. He has had enough. Jumping up he allows as how the barrel must be getting fouled and throwing off his shots. I smile sweetly at him.

It is my turn. The Old Fart is now disgruntled and talking to himself in a low voice but I make out some colorful profanity. He picks out a dog on the far side of the town, crosswind. I am shooting the Jaybird, not a chance of hitting anything at that range. I turn and look at him. He mumbles something and finds a dog closer in, downward. This one dies. He finds another and I hit it after two shots. I am peering through the scope again at another dog and it stands straight up and then dives down the hole.

I am wondering what spooked the dog when something wet hits me on top of the head, lots of it. I look up to see a huge black thundercloud. Water is actually falling out of the sky. Lots of it.

In less than three minutes the gear is back in the truck and we are headed out to the road. The pickup groans along in four wheel drive, the wheels occasionally slipping madly. Mix prairie soil and water and you have instant gumbo mud (grease). We make it back onto the road which is good. The winch on the front wouldn't have been much help since there is only sagebrush to hook onto.

We cruise the road awhile looking for a dogtown that we can get into without getting stuck. We find a small one but only a couple of dogs are showing their noses since it is still sprinkling. We decide to try it anyhow. It quits raining but the wind picks up to something approaching a gale. I stick the wind flat out in front of the bench and it promptly blows over. My rifle needs cleaning so I set it up on the cleaning rack and dig out the cleaning gear. My patches go sailing away and the bottle of Shooter's Choice blows over and spills. I need three hands to get the barrel cleaned.

I have not driven several hundred miles to sit in the truck so I sit down at the bench and look for something to shoot at. The Old Fart is huddled against the side of the truck out of the wind and doesn't feel much like spotting but he does after I give him a couple of glares. Wonder of wonders, a few dogs are out sitting on their burrows staring at us. Word must have got out that there was a circus in town.

The wind is hitting me hard and the old bench is wobbling from side to side. I stare through the scope and watch the landscape go around in a circle. I am starting to get seasick. I figure out just what part of the arc to pull the trigger so the muzzle will be pointing at the dog when the gun fires. The bullet goes somewhere, just where cannot be determined. I brace myself hard against the bench to steady it and try again. Another miss but this time I see where the bullet impact is. Nowhere near the prairie dog. The dog sits straight up and stares at us in disbelief. The Old Fart is snickering.

About fifty yards out a dog comes out to see what all the noise is. He never has the chance to find out. I am satisfied. We look out and see a solid wall of rain coming at us.

This time we give up and head back into Zortman for lunch and dry clothes. I pour another cup of coffee and try desperately to keep from spilling it all over me while The Old Fart swerves back and forth trying not to miss any potholes.

We have a greaseburger at the cafe and go back to the cabin. I settle in for a nap again. I am barely asleep when The Old Fart sets in to making noise again. Anyone want a gunbearer cheap?

LEFT THE RANGE

BASIL TULLER, of Galeton, Pennsylvania, died on October 18, 1990, at the age of 88. Basil was the originator of the leather sandbags that are in universal use with the benchrest competitors today. He had been a long time employee of the Galeton Glove company, and in the late 1940s found himself less than satisfied with the cloth sandbags then the accepted norm. He developed the modern sandbag, including the tubular extension for funnel insertion that all of us have had to wrestle with over the years (we note, however, that no one has found a better way since). Soon he was sending bags around the country. The editor can remember Basil at matches in the late 1960s . . . he would be there with a modest display of sandbags and portable shooting/reloading benches . . . made of plywood and Sears Roebuck folding ironing board legs. We bought one of these contraptions from Basil in 1967; it's still in regular use today. Not known to many of the benchrest shooters was the fact that Basil was a national level smallbore shooter; he had the country's highest average in 1946. He left his estate to the Northern Tier Children's home, his favorite charity. The company that he founded, Protektor, today employs eleven people, and ships their products worldwide.

AIR GAGE BARRELS

FOR CLOSEST TOLERANCE — In "Chrome-Moly" and Stainless Steel. All calibers up to 458 Winchester. Blanks or Finished Turned in standard or target tolerance chambers.

Ask for free data on all our services. DISCOUNTS TO GUNSMITHS.

Write to

DOUGLAS BARRELS, INC.
5504 Big Tyler Road
Charleston, West Virginia 25312

CARBIDE MANDRELS

22 cal
6 mm
25 cal
7 mm
30 cal

Hart & Sinclair
Neck Turners

$50 each

VINCE GIAIMO
WESTCHESTER CARBIDE
148 Wheeler Ave.
Pleasantville, NY 10570
914 769-1445

American Single Shot Rifle Association

ASSRA

An organization dedicated to the shooting and collection of single shot rifles from the turn of the century Scheutzen and Creedmoor traditions.

Traditional offhand, benchrest & long range matches are held every summer in the U.S. and Canada, using plainbase lead bullets.

For information & sample copy of the bi-monthly publication, THE ASSRA NEWS, write to: Larry B. Thompson, 987 Jefferson Avenue, Salem, Ohio 44460.

JOHN BUNCH

Dear Dave,

Excuse the hand-written letter. I started off with my trusty typewriter, but it does appear as if Old Trusty has just passed away.

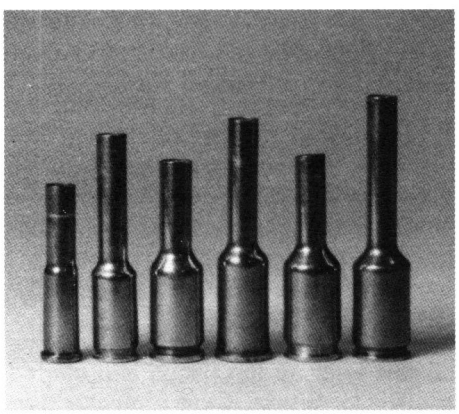
It's not too hard to suspect that you are, at heart, a wildcat freak. I have to admit that I am one as well, and so are a great many others that I know. (Editor: what is this . . . True Confessions time? Why are we washing all this dirty laundry in public, anyway?)

During the past year interest seems to have picked up quite a bit in the area of short .30 calibers, and there has been increasing attention the BR case.

When I am asked how I make up a new wildcat, the answer is simple enough . . . determine which basic case you wish to work with. . . . Resolve the specifications such as the overall case length, neck length, shoulder angle, and caliber. Then make up a case. The next step is to make, or have made, the chambering reamer. Chamber and fit the barrel, and fire form your cases. It sounds very simple.

Many shooters tell me that they have the basic idea down all right, but they can't make the cases without all sorts of trouble, and case loss.

The cases that I am sending you, along with this letter, are all made with the same set of dies.



(Photo courtesy of Rick Hornbeck.)

I can take any case . . . from a .458 to a .22 Hornet . . . and make it any length, from the original length to the lengths of the enclosed cases. And any caliber, from the original to .17 caliber. And seldom lose a case.

I fire form using about 2/3 case full of Red Dot powder, and the case mouth stuffed with cotton; then you are ready for loading with a bullet.

I admit that few wildcats perform up to the expectations of the originator (or his followers . . . if any) . . . but then again . . . where would we be without the experimenters.

Today the BR case, shortened to give a capacity equal to that of a .223 case, with a 40 degree shoulder, in both .22 and 6mm will shoot with any case, and it is very easy to make it work with a ppe, or even a .222 bolt face.

I think that a lot more of our young shooters would start wildcatting when they learn to make cases.

I have been asked by quite a few shooters to make them a set of forming dies. But making up 3 or 4 sets would be cost prohibitive. I could probably make up 50 or so sets, in a price range of $125.00 per set, but I might end up with 40 sets on my hands . . . and one set will last me a lifetime.

If you wish to publish a picture of these cases, be my guest. It might get more wildcats started.

John Bunch
5303 Jefferson,
Route 2
Garland, Texas 75040

Merrill Martin

Continued from page 13

end was that I didn't know! I believe in the possibility of a super lube but I'm also sure that I didn't test it.

I'm lucky I shot the MOsin 28-30 in the test as two important things were learned; one, extensive jacketed fouling can be removed by pressure lapping. Two, wads are still accelerating into the base of the bullet after they leave the bore.

The rough 45-70 became smoother and shot more accurately.

The worn-out M70 barrel stayed worn out.

The Douglas 30 cal. became smoother and shot more accurately

The Rem. 7MM08 was easier to clean and didn't require much cleaning.

In no case did P. checks significantly increase accuracy. Mostly they degraded accuracy or it remained the same. It is true that these were not developed loads but if there was something positive here I would expect to see at least 50% of the loads increase in accuracy. In the 60's I was much influenced by the writing of Col. Harrison. He suggested the use of Dacron and kapok fillers to position the powder. He was thinking in terms of a practical hunting load. It took me quite a while to firmly establish that they also degraded accuracy and perhaps for the same reason.

Pressure lapping takes longer than you wold think. What with pre-test + after-test and control loads + record keeping, each of the rifles shot indoors consumed about 8 hours. Even the 788 shot outdoors with only cursory records took about 4 hours. Something over 1,000 rounds were fired indoors. It does not have to take that long or consume that many rounds if you are willing to accept that the method works.

This lapping system is going to be a boon for military and Production Class rifles. Rifles with basically good barrels but just too rough for good cast bullet shooting. If you can't push a dry snug fitting patch through your rifle after shooting I think you will benefit from lapping.

Dear Ed:

I would like to forward your report on to *Precision Shooting* and see no problem with you also sending it on to *Fouling Shot*—unless the two magazines object. P.S. gets first dibs, though, as this was all for their benefit. (Editor: No sweat; we're easy to get along with!)

It's rather ironic about the P checks, as my CBA record was also without the P checks. For some reason, better accuracy was had without them using the GC style bullet.

Plain base lead bullets are a "whole 'nother ballgame." P-wads are like a miracle with them. Suddenly, no leading, better accuracy, higher velocity, better lube tolerance, better hardness tolerance.

I'm glad someone else also found out how muzzle-sensitive these wads are. The slightest defect will throw things for a loop. Using the softer, slower, plain base bullets, the muzzle pressure are rather low, especially if using the shotgun powders. As we go out into the GC and harder, faster, bullets, more pressure is on the wad as it exits and the edges get blown out. Of course, harder wads could correct that, if necessary, but that's another avenue of research.

Yes, pressure lapping is not a quick process—very time-consuming and, as you noted, rather well rewarding. I loved your comment, "a worn-out barrel stayed worn-out" after lapping. A few guys are still trying to raise the dead.

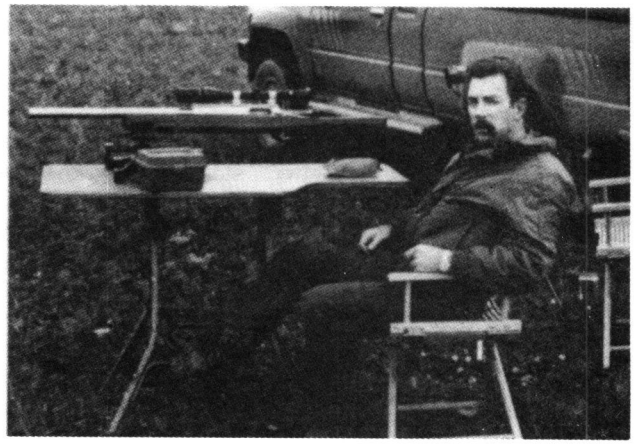
Thanks for the efforts and information, so we can pass it on.

Yours truly,
Merrill D. Martin

TALES OF THE OLD FART

by

Boyd Mace



It was raining again. I turned on the windshield wipers, relighted my pipe and stared through the window at the Old Fart sloshing through the ankle deep water looking for firm ground. I mused over my predicament—an alkali flat, treacherous even in dry weather and with a gulch on either end. No way to get around it and eight miles back to pavement.

A lot of people have lost vehicles in these things. The crust may look firm but underneath it never dries up. A stuck pickup may sink completely out of sight before help arrives to pull you out. If we had to walk over and find help about the only thing that would get us out would be one of those monster farm tractors with four wheel drive and tires taller than I am. Might as well give the farmer my credit card and tell him to have a good time in Hawaii.

I sat there sucking on my pipe stem and thinking about how foolish it was to even attempt crossing an alkali flat in the wet. This one wasn't overly large, about two hundred yards across.

Maybe the Old Fart would find enough firm ground that I could make it.

Hearing a noise I realized the Old Fart was yelling at me. Rolling down my window I squinted through the rain at him. He was wearing low top shoes and mud coated him up past his knees. "Over here!" he yelled, "It's more solid this way!" I turned the wheel and felt resistance. Sticking my head out the window I realized with a shock that my truck was sinking, the mud already reached for the axles.

In panic I was already hammering the throttle. All four wheels spun madly for a moment then clawed toward the surface. With the tach near red line I went to second gear, gaining momentum. There was no turning around now, I was committed to going straight across.

The Old Fart heard the engine wind up and turned towards me. "This way!" he yelled. That way hell, it was shorter straight across. He started running towards me, sinking in past his ankles with every step. I had it moving now and kept the throttle down.

He was trying to intercept me. "Stop! Wait for me!" Stop hell, I would sink out of sight. I had a sizable bow wake going in front of me now and it nearly knocked the Old Fart to his knees when it hit him. He was yelling and waving his arms madly when I went by but I was too busy getting it into third gear.

For a brief while he almost kept up. I hadn't realized the old man could run that fast. I hit the bank on the other side of the alkali flat a whole lot faster and harder than I would have liked but kept going another hundred yards until I was sure there was good solid mother earth under my wheels.

I relit my pipe and waited for the Old Fart. As soon as he came alongside I locked the doors and rolled down the window. "Let me in!" he screamed. "Not until you clean the mud off your shoes!" I rolled the window back up fast. Good thing too—he was getting mad.

The Old Fart was an interesting sight. Mud all over him, dripping wet, his hair hanging down over his ears with little rivulets of water running off the ends and down inside his coat collar. He was dancing around out there, yelling and waving his arms but I couldn't hear him very well, it was raining too hard.

He was making no sign of cleaning off the mud so I gave up and unlocked the passenger side door. In a flash he was in, slamming the door and jamming the heater on high. He was still mad, furious actually but I couldn't quite make out the words since his teeth were chattering badly.

I kept my distance so as to keep from getting mud on me and waited for him to calm down. After a while he got warmed up and started feeling better. Seems that when he was sloshing around in the alkali flat the mud was almost like quicksand. Every time he stopped walking he started to sink. He was upset when I left him out there because he coulda just sunk out of sight if he had fallen.

Well I had noticed that, that's why I went for the wild and crazy ride across the flat. He should have said something earlier.

We had another seven miles or so for four wheeling before we made it out to the highway. And the Old Fart made several more trips out in the rain and mud to open gates and search for ways around mudholes. (Editor: What fun! I'm so sorry that I couldn't make the trip.)

We were on the Fort Bellnap Indian Reservation in Montana and this cross country excursion through some of the most desolate country in the west was the Old Fart's idea. Maybe someday I will learn to run the other way when he mentions "shortcut."

It is now August. The weather in Wyoming continues to be extremely hot and dry. Prairie dogs are hard to find except in the early mornings and late evenings when it is cooler. During the heat of the day they are nearly all underground. This morning the Old Fart and I are up early, sucking down large quantities of high octane coffee.

Arriving at one of our favorite shooting sites we set up the bench and started scoping for targets. It was soon after daylight and prairie dogs were visible all around us. I am up first and manage to kill a couple at long range after several shots. I am not shooting well today, maybe it's the coffee or maybe I am just rusty after a few weeks of no shooting.

The mosquitos are fierce in spite of the dry weather. A liberal dose of repellent doesn't help much; I am soon covered with welts. No wind to speak of and the skies are clear. It is cool enough to make me wish I had a jacket. This will not last

long, it has been in the nineties by 0900 nearly every day this week.

The Old Fart starts shooting and is immediately making more hits than I was doing. Something wrong here, maybe he hasn't had enough caffeine. I call a halt to things and drag out the thermos. We swat mosquitos and drink coffee. Some of these mosquitos are a pale green in color, never seen any before. Hope like hell we haven't discovered an endangered species.

I shoot again, a little better this time but not up to my standards. Killed one at over 700 yards but it took three shots. Missed some at close range. I gave up and set the gun aside for cleaning and to cool the barrel.

The Old Fart wants a long shot. I find one a long ways out. It is a young prairie dog, not yet full grown. The Old Fart wants a range estimation. I squint through the spotting scope and call it at 750 yards. The Old Fart's shot misses low. He raises to the next dot in his scope and tries again. A head shot. The dog folds up.

Well, every dog has his day. I congratulate him on his lucky shot and pour another cup of coffee. He is flushed with success and wants to try another shot. I think why not, his odds are not good. I find two more prairie dogs at the same range and as before and watch through the spotting scope.

At the shot the one on the right just rolls over backwards and lies kicking. Amazing. Before I can say anything he shoots again and the lefthand one falls in a heap.

It is a few minutes before The Old Fart calms down. Really he was making a spectacle out of himself, dancing around and yelling foolishly. We check his scope against the ballistic chart. The prediction is 820 yards. Hmmm. I suggest we walk out and pace it off. He stares blankly at me awhile and then agrees.

On the way out through the sagebrush we awaken several thousand more mosquitos. All hungry. We swat, slap and curse profusely. Considering the dryness we wonder where these things are breedings. What do they eat when there aren't humans around? After some searching we find the dead prairie dogs and pace back to the truck with more swatting, slapping and cursing. The mosquito repellent isn't helping much anymore.

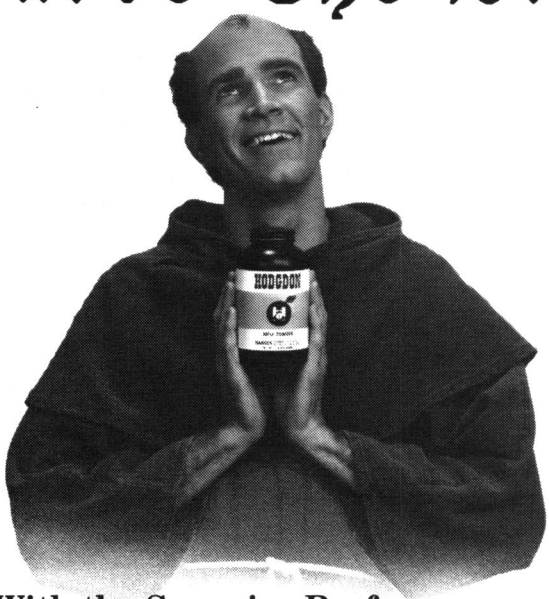
It is 818 long paces back to the bench. The Old Fart wants to add in the barrel length to get another yard. I tell him no way. We haggle away but finally agree that it was at least 800 yards. He is satisfied.

This is a new record for his gun, his 6MM IMP. He was shooting the Speer 85 grain boattail at a chronographed 3720 fps. This bullet isn't the most accurate on paper but it holds tight groups at long range and certainly retains its ballistic coefficient, a rarity among varmint bullets. For the record the gun is built on a 40X action with a Hart 12 twist 28 inch barrel. The scope is a Leupold/Premier 24X with a multiple dot system. The stock is a thumbhole in laminated maple from the gunsmith with the nasty dog. If he ever gets rid of the dog I will stop and ask who manufactures the stock blanks.

The Old Fart has to tell someone so we stop on the way back to town at the local radio controlled model airplane airfield. A couple of his friends are sweating over a plane with a misbehaving engine. They have carburetor parts spread out on the pavement and aren't much interested. We stay around a while and offer advice until they get the thing running. They still aren't interested in the story.

The Old Fart gives up and we go home. He talks about going back out next weekend and trying a thousand yard shot. Sure.

Praise The Load



With the Superior Performance of Hodgdon Powders

Superior accuracy can be achieved through reloading with reliable, consistently performing powder. To achieve this level of consistency, the experts at Hodgdon's select only the finest raw materials and give special attention to blending. Rigorous testing of ***each*** batch of powder further attests to Hodgdon's committment to quality.

For over 45 years, Hodgdon Powder has been a performance leader among shooters. This explains why more winning shooters competing in benchrest matches use Hodgdon Powder.

Hodgdon encourages every shooter to enjoy the advantages and economy of reloading with the superior performance of Hodgdon Powders.

For more information on reloading & Hodgdon Powders, write:

HODGDON POWDER COMPANY, INC.
P.O. Box 2932, Dept. PS11
Shawnee Mission, KS 66201

HODGDON 'S INDUSTRY INSIDERS

Bob Giarusso
Sales, Nosler Bullets
300 Win. Mag. Caliber
180 gr. Nosler Partition Bullet
75 Gr. Hodgdon H450 Powder

Outers Foul-Out
The Ultimate Barrel Cleaning System?

by

Bob Jourdan

Barrel cleaning can really be the pits in a shooter's life. Some adjust to it, a few even enjoy it, but the remaining 99% look at it as a semi-required drudgery. Match shooters find out the hard way just how detrimental a fouled bore can be to accuracy and they quickly develop a cleaning system to fight off the fouling during the matches. But do they thoroughly clean the bore back home? According to what we read in Precision Shooting, and other highly regarded journals, the likes of Ed Shilen, Fred Sinclair, Seely Masker and others think not. Most barrels are simply put away until the next match, along with the accumulated powder and copper fouling that escaped the casual cleaning at the range. At best, some are reasonably clean; at worst, they remain fouled to a point of complete loss of match accuracy. Many are the stories of the wise, old-time benchresters huying a so-called "shot-out" barrel, properly cleaning it and returning to win the next shoot with it.

And now Outers announces the arrival of the gun barrel savior, their patented Foul-Out cleaning system. Does it work? Or is it only another wonder system—you buy it and later wonder why.

The kit consists of the "Black Box" (all high-tech has to have a black box) complete with red lights that almost talk (according to one of the Outers employees), a plug-in transformer and output cables, 8 oz. of Cop Out, 8 oz. of Lead Out, a small dispensing bottle, several lengths of stainless steel rods, four rubber chamber-barrel plugs, a series of O-rings used to insulate the rods away from the barrel and an instruction booklet plus some advertising materials to help condition your mind in the proper manner.

The instructions are plain enough, with no great surprises for the startup. Thoroughly clean the bore being sure to wash carefully with petroleum free solvent, connect the unit to electricity, plug the chamber, stand the gun up and brace it, fill the bore with the chemical solution, put insulators on the steel rod and insert it down the bore. Connect a wire to the barrel or action and another to the steel rod. Turn on the power and watch the lights come on. Pretty!

There are 10 lights (LEDs, Light Emitting Diodes) to indicate the degree of fouling, plus one that indicates "Clean." Ten lights indicate bad fouling, seven lights indicate moderate fouling and three lights indicate light fouling. The last light says "Clean."

After operating about 30 minutes, shut the unit down, remove, inspect and clean the rod. Assuming we are using the Cop Out solution and trying to remove copper the rod should have a thin film of copper on it. Clean it, put it back in the bore, turn the unit on and start waiting. And perhaps waiting . . . and waiting. . . In talking with the Outers chemist it seems that four hours of waiting should be enough if the unit continues to show multiple lights. If so, stop, dismantle, pour out the used solution, thoroughly clean the barrel (bore cleaner, brushing, Sweets, solvent, etc.) and totally start over. Sooner or later, depending on the amount of fouling, the barrel should come clean.

For my first test I started with a 1916 Mauser M96 military barrel. After only 20 actual hours of unit operation (not counting brushing, changing solutions three times, etc., etc.) there were only two lights showing. Since the chemist had told me that the initial multi-light fouling is the easiest and quickest to clear out, I decided to stop at two lights because I had to get on with my life. Maybe another day or two (or week. . .?) would have cleaned it up totally.

In order to test a much easier case I set up my BR Hunter rifle. It has a premium stainless steel barrel, properly cared for. The same procedure was done. Initially three lights showed for two or three minutes. Then they blinked out one by one until the "Clean" light was left after less than 15 minutes.

Next, a relatively new 6.5x06 Ackley was used. It had been treated much like any well cared for but average hunting rifle. It had frequently been given the standard benchrest cleaning after 15-20 shots. It had, however, been fired as many as 40 rounds without cleaning on a few occasions. After a little less than six hours the "Clean" light was on. During those actual operating hours I stopped and cleaned things up five times. One stop was overnight and I left the barrel soaking with Sweet's. Lots of copper was floated out the next morning.

In my discussion with the Outers chemist I found that they could usually clean stainless steel match barrels much easier than chrome moly barrels. Their thinking was that the smoother barrels pick up less copper than rougher barrels. Astounding...! I always agree with great thinking! They also found that some rougher barrels cleaned up quickly while some smoother ones required many hours to clean. They don't know why.

After having cleaned several barrels I think the best way seems to be to allow one hour on the Foul-Out, shut down, clean the rod and thoroughly clean the barrel. Use regular BR9, Shooters Choice, etc., brush heavily. Use Sweets and allow it to soak a few minutes. Then patch it all out and clean the bore with non-petroleum solvents and start over with the Foul-Out. The Outers chemist recommends not leaving the system on over four hours if the guide lights are not

JEWELL TRIGGERS
LIGHT PULL TRIGGERS
1.6 to 5.0 ounces
HUNTING — VARMINT TRIGGERS
1.6 ounces to 5 pounds
Both with, or without, safeties
ARNOLD JEWELL
1922 Louann Drive
New Braunfels, Texas 78130
(512) 620-0971

Mike McGee
— **Custom Painting**
— **Candy Apple Colors**
— **Rainbow Colors**
— **Metal Flake**
Discounts to Gunsmiths
Mike McGee
Rt. 35 P.O. Box 342
Corriganville, Md. 21524
301-777-5193
Eve. 301-777-3758

changing. This could indicate the rod is coated and nc longer picking up copper, or the first copper layer is gone and a residue of hardened, burnt powder is blocking further action. It would be time to again disassemble and repeat the above.

On really bad barrels this method should be totally repeated every hour or two and you should expect it to go on for at least a day or two. I found that severe brass bushing did more to speed the process than anything else.

A Foul-Out kit certainly won't be for everyone. Priced in the $300 range the average hunter will not try one. Even the informal target shooters will save their money for other more economical cleaners. I have not yet met a serious benchrest shooter with a Foul-Out system. Thus, it is my opinion that this system will be used mostly by gunshops or multi-gun owners who are serious experimenters. The system is not fast and is very labor intensive. None of the general

BRUNO
SHOOTERS SUPPLY

BRUNO BRUSH SPECIAL
10% off all brush $8.33

ADJ. SHOOT STOOL
Padded Seat Solid Oak $39.95

H322 - 8 lbs. - $95.00

New Bunny - Heavy Bottom & Sides
New Rabbit - Heavy Bottom & Sides
$24.95

Federal 205m Primers per 1000, Sm. or Lg.	$ 21.95
Rem. 7½m Primers per 1000, Sm. or Lg.	19.95
Rem. 9½ Primers, per 1000	19.95
Bonanza F.L. Size Dies 22 or 6PPC	18.95
Hart Rifle Rest (Varmint)	98.95
J-4 Jackets 22 cal.	49.95
J-4 Jackets 6mm	46.95
Kleinendorst Bolt Disengagement Tool	21.95
Lee Auto Prime (2 trays)	13.95
Davidson Bullet Puller 2 hole 12.95 3 hole	13.50
Uncle Mike's Scope Caps	10.95
Bushnell Lt. Wt. Scope Rings	12.95
Comparitor Micrometer (carbide) reads in millionths	199.95
Dial Caliper 6" Mitutoyo	81.00
Dial Caliper 6"Stainless Steel	39.95
Ball Micrometer	84.95
Standard 1" Micrometer 1-10,000 carbide	28.95
Lyman Culver Powder Measure	195.00
PPC Cases Sako-USA	.59
Shooting Stools, solid oak w/vinyl padded seat	39.95
Never Dull - can	3.25
Whitetail Carbide Primer Pocket Uniformer	20.95
Bruno Aluminum Side Tension Rest Top	48.00
Bruno 310 Tool Neck Size Die, Accepts Wilson Bushings (Less Bushing)	75.00
Bruno Custom Bolt Holster	12.00
Bruno Custom Scope Covers (Specify model)	
New 36X Leupold	12.95
Old 36X Leupold	12.95
Bausch & Lomb	12.95
Bruno Loading Block (PPC), Lucite, Holds 20	12.95
Bruno Delrin Loading Block, White, holds twenty	11.95
Hart Rifle Barrels, HV-LV	199.95
Bald Eagle Front Rest	129.95
Book, "The Ultimate in Rifle Accuracy," Newick	34.95
Best of Precision Shooting	8.50

Cleaning Supplies

Bruno Custom Core Brush	
New 17 Cal Rifle Per Piece - Dew or PH	$ 1.75
22, 6mm, 25, 6.5, 270, 7mm, 30, 303, 8mm, 338, 35, 375, 458 Per Dozen	9.25
Pistol - 22, 38, 9mm, 41, 44, 45 Per Dozen	9.25

Bore Guides with O Ring -

Rem, Hart, Stolle, Shilen, Winchester (State Caliber — be specific)	12.95
Hall, Wichita, other	14.95

Patches - Bruno Cotton Flannel

22 Cal 1⅜ Square Per M	6.75
6mm Cal. 1¾ Square Per 500	5.25
6mm or 30 Cal 2" Rd. Per 500	6.00
1¼" Round Per M	6.75

Shooter's Choice #7

2 oz. w/applicator	3.05
4 oz.	4.65
16 oz.	15.40
Gun Grease, 10 cc. Syringe	2.75
Rust Preventative (Aerosol)	3.15
Quick Scrub cleaner-degreaser (Aerosol)	3.50

Lube - Solvents - Solvent Bottles

Bruno - Bolt Lube Plastic Syringe	2.95
Bruno Solvent Bottles Leak Proof 2 oz.	3.00
Bruno Solvent Bottles Leak Proof 4 oz.	3.25
Sweets 7.62 Solvent 8 oz.	6.50
Hoppies 4 oz. Benchrest Solvent	4.50
Hoppies 16 oz. Benchrest Solvent	12.65
Hoppies #9 2 oz. bottle	1.40
Hoppies #9 4 oz. bottle	5.25
Hoppies #9 32 oz. bottle	8.75
Hoppies #9 Gallon can	32.95
Hoppes #9 (old w/Nitro) - Pint	8.95
Hoppes #9 (old w/Nitro) - Qt.	13.95
Hoppes #9 (old w/Nitro) - Gallon	45.00

Sweets - Swabs

22 Sweets Swabs	1.00
6mm Sweets Swabs SPECIAL	.85
7mm Sweets Swabs	1.00
30 & Up Sweets Swabs	1.00
Chamber Swab - PPC, .222, 7mm, .308	1.00

Bruno Bullets per 100

22 Cal. 52 Grain FB	10.95
New 22 Cal. 57 Grain FB	10.95
New 22 Cal. 63 Grain FB	10.95
6mm 63, 65, 68, 70 FB	11.50
6mm 63, 65, 68, 70 BT	11.95
New 6mm (9-S) FB or BT	13.00
(Min. Order 500 per caliber and weight)	

Sinclair Products

Sinclair Arbor Press	65.00
Sinclair Neck Turner - Two Calibers Complete	56.75
Mandrel for Neck Turner	9.75
Sinclair Concentricity Fixture	38.95
Sinclair Rifle Caddy - Stand - 1 Caliber	30.00
Sinclair Rifle Caddy - Stand - 2 Caliber	51.00
Sinclair Side Tension Rest Top (New 1986)	43.00
Sinclair Action Cleaning Kit	17.75
Sinclair Pill Bottle Adapt. Lyman, Reading	18.50
Sinclair Neck Expander 2 Calibers	20.25
Sinclair Case Length Trimmer Mini, 22, 6mm	16.00
Sinclair Primer Pocket Uniformer	27.75
Sinclair Carbide Primer Pocket Uniformer	32.95
Sinclair Bolt Disengagement Tool Remington	16.75
Sinclair Deluxe Deburing Tool with Shouldered Top Large Flash Hole	15.75
Sinclair Deburing Tool - Flash Hole PPC	15.75
Sinclair Powder Measure Bracket	13.50
Sinclair Seating Depth Comparitor 6 Calibers	11.50
Carbide Phase II Primer Pocket Uniformer	
Carbide, Small Rifle, plastic handle	18.50
Carbide, Large Rifle, plastic handle	18.50
Carbide, Large Pistol, plastic handle	18.50
Drill Press Type, small rifle - carbide	13.50
Drill Press Type, large rifle - carbide	13.50
Drill Press Type, large pistol	13.50

Parker Hale Coated Rods

17 Cal. - 32" Coated Rifle	17.50
17 Cal. - Jag	2.65
22, 6mm, 30 - 37" Rifle Rod	17.50
22, 6mm, 30 - 44" Rifle Rod	17.50
Jag or Adaptor Per Piece	2.65

Dewey Coated Rods

22, 6mm - 36" Rod	15.75
22, 6mm - 44" Rod	16.25
30 Cal. - 36" Rod	16.75
30 Cal. - 44" Rod	17.25
Jag - 22, 30	2.65
Adaptor 22, 30	2.65
Dewey 17 cal. Stainless Steel Rod 36"	18.50
Dewey 17 cal. Jag	2.65
Dewey Coated 17 cal. - NEW	20.95

Wilson

Case Trimmer	26.80
Case Holder	4.80
Neck Size Die, Less Bushing	31.65
Straight Line Bullet Seater	31.65
Bushing, Reversible	7.65
Full Length Resizing Die	15.30

Redding

New Redding BR-30 Powder Measure (New for '90)	77.95
Redding (3-BR) Match Grade Powder Measurer	67.95
Redding (3BR-P) Match Piston Chamber	67.95
Redding (3BRK) Match Grade both Chambers	88.34
Redding (RS-6) Bench Stand for above Measurers	14.95
Redding Full Length Size Die, 22, 6PPC, BR, other	24.95
Redding Standard Shell Holder #12 PPC	4.75
Redding Extended Shell Holder #12 PPC	5.95
Redding BR-30 Powder Measurer	73.95

Scopes

Bausch & Lomb 36X C.H.	339.95
Bausch & Lomb 36X Dot	344.95
New Leupold (X-Hair) 36X	369.95
New Leupold (Dot) 36X	382.95
New Leupold (X-Hair) Silver 36X	382.95
New Leupold (Dot) Silver 36X	395.95

Tuller Sand Bags - Protektor Model

(New) Rear Heavy Duty	24.95
Tuller Sand Bags Rear, Bunny, Rabbit	12.50
Tuller Sand Bags Front #1 Hunt. Rifle	8.95
Tuller Sand Bags #2 2½" competition	8.95
Tuller Sand Bags #3 3" wide	8.95

Triggers

Jewell - Standard 2 oz.	139.95
Jewell - H.V.R. Adjustable 1.5 oz. to 4.5 lb. — with safety (Fits Rem. Type)	179.95
Hart - 2 oz. (Fits Rem. Type)	103.95
Canjar LP 2 oz. (Fits Rem. Type)	102.95

Redding BR-30 Powder Measurer (New)	77.95
H-322 8 lbs.	95.00
Newick Ulitmate in Rifle Accuracy	34.95
Bruno Oak Adjustable Shooting Stool (Padded)	39.95

We are a Sweets 7.62 Distributor

Davidson Barrel Vise	36.00
Davidson Rear Entry Wrench (state action)	32.00
Davidson Side Port Wrench	32.00

K&M Tools

K&M Peewee Internal Deburring Tool 17 cal.	9.50
K&M Master Internal Deburring Tool (Standard)	9.50
K&M Master Internal Deburring Tool (PPC)	9.50
K&M Professional Internal Deburring Tool (Standard)	14.50
K&M Professional Internal Deburring Tool (PPC)	14.50
K&M (Markie) Primer Seater Tool (Deluxe)	39.95
K&M Primer Gauge w/dial indicator assembly	97.50
Dial Indicator Assembly to fit Deluxe Seater	65.00
Lee Shell Holder to fit K&M Seaters	3.25

(Each Primer Seater comes with small and Large Primer Holder)

VISA MasterCard

Credit Card Orders Charged 4% Additional

Please include payment with order. Include ample shipping, overpayments will be refunded. ADD $3.50 for COD orders. All orders will be shipped UPS. PA residents add 6% sales tax. Dealer price sheets available with signed copy of FFL. Prices subject to change without notice. Other products available. Write for complete price sheet to:

BRUNO SHOOTERS SUPPLY
10 - 5th St. Kelayres, Pa. 18231
(717) 929-1791
(717) 929-3022
455-2211

public type shooting magazine writers have really mentioned this, nor have they mentioned that the Foul-Out instructions recommend partially dismantling the firearms before starting the cleaning. Outers warns that the chemicals, which are water base, can be harmful to the stock and exposed metals and that recoil reduction ports and gas operation ports must be sealed before using Foul-Out. The chemicals and water would be corrosive and if allowed to enter these ports or to be trapped between the stock and metal nothing good could happen.

It would seem that any $300 kit should be relatively complete. Upon reading through the instructions it becomes obvious that the buyer will have to provide a metal degreaser of the non-petroleum type, some form of nitro solvent, a rust preventive water displacement product, another clear bottle to pour used chemicals in for color checking and handling, a bit of fine sand paper to cut the copper or lead off the steel rods, plus regular patches and brushes. Since most all these items are produced and sold through Outers it would be simple to have them included in the kit. The cost of Outers would be minimal but the public relations gain would be great.

For the gunshop or multiple gun owner using the Foul-Out system the most serious shortage in the kit is the amount of chemical. They only provide 8 oz. of each, enough to do six to 12 barrels depending on the amount of fouling. Once it is gone there is no substitute and most routine Outers dealers won't stock it due to the slow, specialized sales. Thus, it must be ordered at a price of $7 to $10. per pint including shipping. Shame on big Outers for putting less than a pint in this kit! In talking with Outers on this they believed the buyers of the kits would be individuals with one or two guns, therefore no need for larger quantities of chemicals. I can sure see the .30/30 owners lining up to buy $300 cleaning kits. . . .

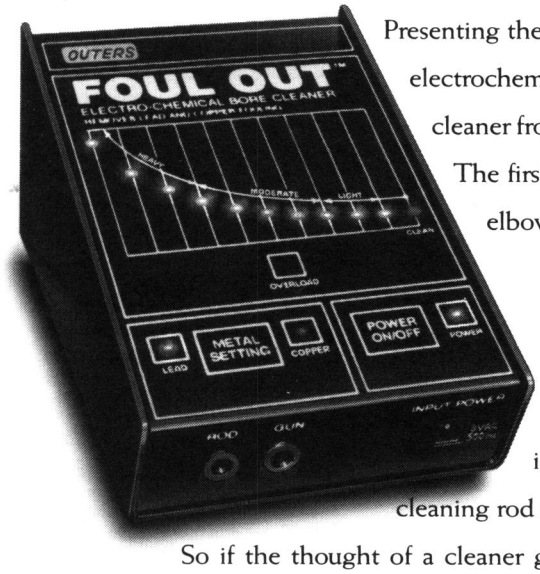
Other items that might be of concern in the kit include the one and only rubber chamber plug that fits cases like the PPC and .308, as well as most modern centerfire cartridges and resulting chambers. What will one do if the plug gets worn, damaged or lost? These are not common items in Luther, Oklahoma! Yes, fishing corks are common in Luther and would do until they crumble and deposit their particles all down through your action, not to mention the chemical and water running through your trigger! Do you think Outers could see their way clear to supply two of these plugs in this $300 package to allow a backup when one breaks right in the middle of a big cleaning job? First, it would require a complete study of company economics . . . then form a steering committee . . . and with the oil crisis we have to charge more now while waiting to see what effect the oil price will have on this rubber plug . . . then, too, Aunt Susan is expecting soon. . . Probably better not put in another chamber plug.

All-in-all, the Outers Foul-Out seems to work. After gaining experience with it the time requirement to operate would be reduced somewhat. However, it is not a cleaning device that can be started and walked away from for long. The workload is not light, the bore has to be scrubbed just as before, parts and supplies must be kept, etc., etc. But, still, if you get one you will find a very unique way of cleaning fouled barrels.

Have fun, and let me know if you find a better way!

Bob Jourdan
385 Fenway Place
Bartlesville, OK 74006
Phone 1-918-333-5276

OUTERS® NEW FOUL OUT™ GUARANTEES THE WORLD'S CLEANEST GUN BARRELS WITH NO ELBOW GREASE.

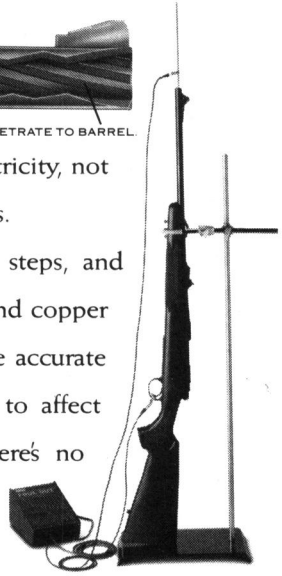


Presenting the Foul Out electrochemical bore cleaner from Outers.

The first bore cleaner in the world powered by electricity, not elbow grease. You won't believe how well it works.

Just plug it in and follow a few simple steps, and our patented process totally removes lead and copper deposits. And a cleaner gun means a more accurate gun, because there's no metallic build-up to affect internal ballistic uniformity. Better still, there's no cleaning rod abrasion. Result: extended barrel life.

So if the thought of a cleaner gun with less effort sounds appealing, visit your nearest Outers dealer. Where electricity is now waiting to be discovered.



FOUL OUT THOROUGHLY CLEANS RIFLES, HANDGUNS AND SHOTGUNS.

OUTERS®
YOUR SHOOTING PARTNER.
CCI · SPEER · RCBS · OUTERS · WEAVER

© 1989 SPORTING EQUIPMENT DIVISION, BLOUNT, INC., P.O. BOX 856, LEWISTON, ID. 83501. 1-800-635-7656.

CARTRIDGE REFERENCE DATA

JOHN J. GAMMUTO

CARTRIDGE NAME	WILD -CAT	BASIC BRASS	CASE TYPE	BULLET DIA.	NECK DIA.	SHLDR DIA.	BASE DIA.	RIM DIA.	CASE LGTH	BRL TWIST	PRIM SIZE
14 JONES	*	22 LR	R	.140	.163	.222	.223	.274	.595	10	
14/221 WALKER	*	221 FIREBALL	C	.140	.164	.350	.376	.378	1.41	10	S
17 REMINGTON			C	.172	.199	.356	.376	.378	1.79	9	S
17 MORLEY	*	22 WMR	R	.172	.193	.239	.240	.291	1.06	10	
17 JET	*	22 REM. JET	A	.172	.199	.366	.380	.439	1.28	10	S
17 ACKLEY BEE	*	218 BEE	A	.172	.195	.334	.349	.408	1.35	10	S
17/222 REMINGTON	*	222 REM.	C	.172	.201	.355	.376	.378	1.72	10	S
17/223 REMINGTON	*	223 REM.	C	.172	.203	.358	.376	.378	1.76	10	S
17/221 FIREBALL	*	221 FIREBALL	C	.172	.201	.361	.377	.378	1.40	10	S
17 MACH IV	*	221 FIREBALL	C	.172	.199	.360	.376	.378	1.40	10	S
17 JACKAROO	*	22 PPC USA	C	.172	.192	.431	.443	.444	1.50	11	S
17/22-250 REMINGTON	*	22-250 REM.	C	.172	.204	.406	.462	.466	1.91	10	L
222 REMINGTON			C	.224	.253	.358	.376	.378	1.70	14	S
22/35	*	222 REM.	C	.224	.243	.358	.376	.378	1.70	14	S
222 REMINGTON MAG.			C	.224	.253	.358	.375	.378	1.85	14	S
22/45	*	222 REM. MAG.	C	.224	.243	.358	.375	.378	1.85	15	S
223 REMINGTON			C	.224	.253	.358	.376	.378	1.76	12	S
23/45	*	223 REM.	C	.224	.244	.358	.376	.378	1.76	15	S
22 JALAPENO	*	222 REM.	C	.224	.244	.358	.376	.378	1.70	14	S
220 RUSSIAN			C	.224	.242	.402	.439	.440	1.51	14	S
22 PPC USA			C	.224	.249	.431	.443	.444	1.51	14	S
22x37 FORRESTER	*	220 RUSSIAN	C	.224	.243	.402	.439	.440	1.38	14	S
22 REMINGTON JET			A	.223	.251	.366	.380	.439	1.28	14	S
22 JET IMPROVED	*	22 REM. JET	A	.224	.248	.371	.380	.440	1.26	14	S
218 BEE			A	.224	.242	.333	.349	.408	1.28	14	S
22 HORNET			A	.224	.242	.278	.299	.350	1.33	14	S
221 REMINGTON FIREBALL			C	.224	.253	.361	.376	.378	1.40	12	S
22 REMINGTOM BENCHREST	*	REM. BR	C	.224	.246	.458	.469	.473	1.52	14	L
22 MASHBURN BEE	*	22 HORNET	A	.224	.244	.337	.349	.408	1.34	14	S
220 COYOTE #2	*	30-30	A	.224	.242	.410	.417	.506	1.76	10	L
219 DONALDSON WASP	*	30-30 WIN.	G	.224	.250	.406	.416	.506	1.75	14	L
219 ZIPPER	*	32 WIN. SP.	G	.224	.252	.365	.422	.506	1.87	14	L
220 SWIFT			C	.224	.260	.402	.445	.473	2.20	14	L
220 WILSON ARROW	*	220 SWIFT	A	.224	.260	.402	.445	.473	2.20	14	L
22 WASP	*	303 BRITISH	A	.224	.250	.446	.455	.540	1.97	14	L
224 GRABR	*	308 BR	C	.224	.242	.460	.470	.473	1.65	10	S
224 WEATHERBY MAG.			E	.224	.248	.393	.415	.429	1.92	14	L
22-250 REMINGTON			C	.224	.253	.417	.467	.473	1.91	14	L
225 WINCHESTER			A	.224	.260	.406	.422	.473	1.93	14	L
6x47	*	222 REM. MAG	C	.243	.266	.357	.375	.378	1.85	14	S
6x45	*	222 REM. MAG	C	.243	.262	.357	.375	.378	1.85	14	S
6 PPC USA			C	.243	.267	.431	.443	.444	1.51	14	S
6mm BR REMINGTON			C	.243	.271	.459	.470	.473	1.56	14	S
6mm TALLDOG	*	7 BR REM.	C	.243	.262	.460	.470	.473	1.43	14	S
6mm SM WASP	*	30 AMERICAN	A	.243	.262	.406	.417	.476	1.65	14	S
6mm REMINGTON (244)			C	.243	.276	.431	.471	.472	2.23	9	L

CARTRIDGE REFERENCE DATA

JOHN J. GAMMUTO

CARTRIDGE NAME	WILD -CAT	BASIC BRASS	CASE TYPE	BULLET DIA.	NECK DIA.	SHLDR DIA.	BASE DIA.	RIM DIA.	CASE LGTH	BRL TWIST	PRIM SIZE
6mm/284 WINCHESTER	*	284 WIN.	C	.243	.276	.475	.500	.473	2.17	10	L
6mm SABRE	*	264 WIN.	E	.243	.269	.495	.512	.535	2.99	14	L
6mm McCLARRAN	*	250 SAVAGE	C	.243	.261	.461	.467	.473	1.83	14	L
6mm SGH	*	6.5 CARCANO	C	.243	.261	.431	.447	.450	1.96	14	L
6mm AMERICAN	*	30 AMERICAN	A	.243	.268	.409	.418	.516	1.71	14	S
240 WEATHERBY			E	.243	.272	.432	.453	.473	2.50	10	L
243 WINCHESTER			C	.243	.276	.455	.470	.473	2.05	9	L
243 SCHUETZEN	*	25-20 WIN.	A	.244	.259	.333	.349	.408	1.32	12	S
257 ROBERTS			C	.257	.290	.429	.471	.473	2.23	10-12	L
257 ROBERTS IMPROVED	*	257 ROBERTS	C	.257	.290	.459	.471	.473	2.23	10-12	L
25/222 COPPERHEAD	*	222 REM.	C	.257	.286	.341	.376	.378	1.66	14	S
25-20 WINCHESTER			A	.257	.273	.334	.349	.408	1.33	13-14	S
25-35 WINCHESTER	*	30-30 WIN.	A	.257	.281	.325	.422	.506	2.04	8	L
257 BANSHEE	*	6.5x68	C	.257	.278	.514	.524	.511	2.67	10-14	L
25 REMINGTON	*	30 REM.	R	.257	.280	.355	.417	.421	2.04	12	L
250-3000 SAVAGE			C	.257	.285	.418	.468	.473	1.91	14	L
256 WINCHESTER MAG.	*	357 MAG.	A	.257	.285	.368	.379	.440	1.30	14	S
25-06 REMINGTON			C	.257	.290	.441	.470	.473	2.49	10	L
257 WEATHERBY MAG.			E	.257	.281	.490	.511	.530	2.55	12	L
6.5 REMINGTON MAG.	*	300 H&H MAG.	E	.263	.298	.496	.513	.532	2.17	9	L
264 WINCHESTER MAG.			E	.264	.298	.491	.513	.532	2.53	9	L
270 WINCHESTER			C	.277	.308	.441	.470	.473	2.54	10	L
270 WEATHERBY MAG.			E	.277	.301	.490	.511	.530	2.55	12	L
7mm EXPRESS REM. (280 REM)			C	.284	.315	.441	.470	.472	2.54	9.25	L
7mm-08 REMINGTON			C	.284	.315	.454	.470	.473	2.04	9	L
7mm WEATHERBY MAG.			E	.284	.307	.490	.511	.530	1.78	12	L
7mm BR REMINGTON			C	.284	.308	.460	.470	.473	1.52	10	S
7mm REMINGTON MAG.			E	.284	.315	.492	.513	.532	2.50	9.25	L
7mm OPUS	*	300 SAVAGE	C	.284	.303	.450	.469	.472	1.87	9	L
7-30 WATERS			A	.284	.306	.399	.422	.506	2.04	9.5	L
7x57 MAUSER			C	.284	.321	.431	.471	.473	2.24	8-10	L
7x61 SHARPE & HART	*	300 H&H MAG.	E	.284	.313	.473	.513	.532	2.40	12	L
284 WINCHESTER			I	.284	.320	.475	.500	.473	2.17	9.5	L
30 M1 CARBINE			D	.308	.336	****	.356	.360	1.29	16	S
30 REMINGTON			C	.308	.328	.402	.420	.421	2.03	12	L
30 AMERICAN			A	.308	.329	.409	.417	.516	2.02	12	S
30 WOMBAT	*	30-30	A	.308	.330	.409	.416	.516	1.78	12	L
30 OPUS	*	300 SAVAGE	C	.308	.327	.450	.467	.472	1.88	12	L
30 AARDVARK	*	30-30	A	.308	.326	.410	.417	.506	2.02	12	L
30 SFG	*	35 REM.	C	.308	.330	.445	.455	.456	1.85	12	L
30 HERRETT	*	30-30 WIN.	A	.308	.329	.406	.421	.506	1.60	12	L
30-30 WINCHESTER			A	.308	.330	.402	.421	.506	2.04	12	L
300 SAVAGE			C	.308	.339	.449	.471	.473	1.87	12	L
300 WINCHESTER MAG.			C	.308	.339	.491	.513	.532	2.60	10	L
300 WEATHERBY MAG.			E	.308	.332	.490	.511	.530	2.82	12	L
300 H&H MAG.			E	.308	.338	.457	.513	.532	2.85	10	L

CARTRIDGE REFERENCE DATA

JOHN J. GAMMUTO

CARTRIDGE NAME	WILD -CAT	BASIC BRASS	CASE TYPE	BULLET DIA.	NECK DIA.	SHLDR DIA.	BASE DIA.	RIM DIA.	CASE LGTH	BRL TWIST	PRIM SIZE
303 SAVAGE			A	.308	.334	.408	.439	.501	2.00	12	L
30-40 KRAG			A	.308	.338	.423	.457	.545	2.31	10	L
307 WINCHESTER			C	.308	.344	.454	.471	.506	2.02	12	L
308 WINCHESTER			C	.308	.343	.454	.470	.475	2.01	10	L
308 NORMA MAG.			E	.308	.340	.489	.511	.530	2.56	10-12	L
7.62mm RUSSIAN			A	.308	.336	.458	.489	.570	2.05	10	L
7.62x39			C	.308	.325	.392	.439	.445	1.51	14	L
30-06 SPRINGFIELD			C	.308	.339	.441	.470	.473	2.49	10	L
303 BRITISH			A	.311	.338	.412	.455	.540	2.21	10	L
32-20 WINCHESTER			A	.312	.326	.338	.353	.405	1.32	20	S
32 WINCHESTER SPECIAL			A	.320	.343	.403	.422	.506	2.04	16	L
8mm MAUSER			C	.323	.349	.434	.469	.473	2.24	9-10	L
8mm/06	*	30-06 SPRING.	C	.323	.351	.441	.470	.473	2.49	16	L
8mm REMINGTON MAG.			E	.323	.354	.487	.513	.532	2.85	10	L
338 WINCHESTER MAG.			E	.338	.369	.491	.513	.532	2.49	10	L
340 WEATHERBY MAG.			E	.338	.361	.490	.511	.530	2.82	12	L
348 WINCHESTER			A	.348	.376	.485	.553	.610	2.26	12	L
350 REMINGTON MAG.			E	.358	.388	.495	.512	.532	2.17	16	L
351 WINCHESTER SL			H	.351	.373	****	.377	.407	1.38	16	S
357 S&W MAGNUM (RIFLE)			B	.357	.379	****	.379	.440	1.29	18.8	S
35 REMINGTON			C	.358	.384	.429	.457	.460	1.92	16	L
356 WINCHESTER			C	.358	.384	.428	.457	.460	2.02	12	L
358 WINCHESTER			C	.358	.388	.455	.470	.473	2.01	12	L
35 WHELAN			C	.358	.385	.441	.470	.473	2.50	12-14	L
358 NORMA MAG.			E	.358	.388	.489	.511	.530	2.52	12	L
375 WINCHESTER			B	.376	.400	****	.420	.506	2.02	12	L
375 H&H MAG.			E	.375	.404	.463	.513	.532	2.85	12	L
378 WEATHERBY MAG.			E	.375	.398	.560	.582	.582	2.92	12	L
38-55 WIN. & BALLARD			B	.379	.392	****	.420	.506	2.12	18	L
38-40 WINCHESTER			A	.401	.416	.438	.465	.520	1.30	36	L
416 REMINGTON MAG.			E	.416	.447	.487	.509	.530	2.85	?????	L
416 WEATHERBY			E	.416	.444	.561	.582	.580	2.92	?????	L
44-40 WINCHESTER			B	.427	.443	****	.471	.525	1.31	20-30	L
444 MARLIN			B	.429	.453	****	.469	.514	2.16	38	L
45-70 (1895)			C	.458	.480	****	.500	.608	2.03	20	L
45-70 (RUGER)			C	.458	.480	****	.500	.608	2.03	20	L
45-70 (TRAP DOOR)			B	.458	.480	****	.500	.608	2.10	18-22	L
458 WINCHESTER MAG.			F	.458	.481	****	.513	.532	2.50	14	L
460 WEATHERBY MAG.			E	.458	.481	.560	.582	.582	2.91	14	L

PROTECTOR MODEL
re-introduces
A PORTABLE SHOOTING BENCH
- 4'0" x 2'0" x ¾"
- Birch Veneer
- Radius cut out for shooting comfort
- 75.00

7 ASH STREET
GALETON, PA 16922

RAIL MACHINE RESTS
Hall Style, one piece base, made with hardened stainless steel, and aluminum. Adjustable sighter cam. $1,400, plus shipping.

BUD WELSH
80 New Road, East Amherst, N.Y. 14051
(716) 688-6344 (before 2:00 pm)

Remington.

.308 BR Brass
small primer
$ 8.95 /Box of 20
$ 205 / Case of 500
JENSEN'S
5146 E. Pima, Tucson, AZ 85712
(602) 325-3346
Pre-paid Freight with Pre-paid Order

Question of the Month

Dear Mr. Masker

I am writing to you as a Rail Gun Columnist of P. S. Magazine. I would be most grateful if you would write me with information concerning rail guns of the return to battery rest type. I would be interested to purchase a second hand rifle of this type and I would like a model with the action clamped rather than the barrel as I would like to use different barrels on the same action. I have seen a picture of the Ferguson Machine Rest and it would suit me but they are long out of business. I would consider purchasing the stock only or complete gun and then have it rebuilt to my spec. I wonder if you could provide me with names and addresses of current makers as well as those of the past so that I can enter an advertisement in P. S. knowing of purchasing the right equipment. We have a part time gunsmithing business; therefore I have no problem in buying a complete rifle. I mostly shoot for testing rather than competition, but I am very interested in one of these rifles. I do look forward to hearing from you and I thank you for all the help you can give me.

Dr. F. Moretti
P. O. Box 65
1-42074 Rolo (RE)
Italy

Jerry Masker's Reply

Dear Dr. Moretti,

Thank you for giving me this opportunity to help you.

As you can well imagine, rail guns come in many variations. The Ferguson rig you mentioned is of very good quality and for years was the standard by which all others were judged. In recent years, however, these rigs have become hard to find and the rules of the game have changed. The Ferguson system involved a two-piece rest. The sighter cam and windage and fine elevation adjustments were made with the rear rest while coarse elevation adjustments, I believe, were made with the front rest. The front rest consisted of a tripod similar to the Hart or Wichita rests we use for Varmint class competition today modified to support the rail. The competition rules today allow the use of a one-piece rest which most people believe is more accurate, although you will still see two-piece rests in use and they do win matches.

My rig was made by Bill Hall; however, he is no longer making them. My father, Seely Master, whose advertisements can be found in P. S. Magazine, did the gunsmithing. The base of my rig weighs about 30 pounds and the top about 35. When I got mine, Bill was the only one I knew of who made them in any quantity. I had always wanted one, but everyone I asked about them just gave me blank stares or said "what the heck do you want one of **those** for?" So for Bill there will always be a warm spot in my heart. I have enclosed a picture of my rig. Mine is one of the earlier models where the sighter cam consists of a lever you have to lift and hold; later versions had a locking cam. Since I don't use the sighter as much as some other shooters, this does not bother me much.

Today there are several people who make them. The first I will mention is my friend Bud Welsh, 80 New Road, East Amherst, New York 14051. You can find

TRIGGER TUNING

All Remington centerfire bolt actions except Model 788. Set to specified weight-of-pull, one pound minimum, no creep. Send trigger assembly only. Cost $25.

NEIL JONES CUSTOM PRODUCTS

R.D. 1, Box 483-A,
Dept. PS
SAEGERTOWN,
PENNSYLVANIA
16433
(814) 763-2769

Brochure $2.00

MasterCard VISA

Specializing in reloading tools, cleaning tools, accuracy equipment and rifle accessories to fill your needs.

PRECISION SHOOTING SUBSCRIPTION

( ) Precision Shooting, one year — $20.00. Canada $22.00

( ) Precision Shooting, two years — $36.00. Canada $40.00

( ) Precision Shooting outside U.S. — $26.00 each yaar, or $44.00 air-mail

SUBSCRIPTION CHECKS NOT DRAWN ON AN AMERICAN BANK WILL BE RETURNED

( ) New ( ) Renewal

MAIL PRECISION SHOOTING MAGAZINE SUBSCRIPTION TO:
PRECISION SHOOTING, 5735 Sherwood Forest Drive, Akron, Ohio 44319

Make checks payable to Precision Shooting.

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

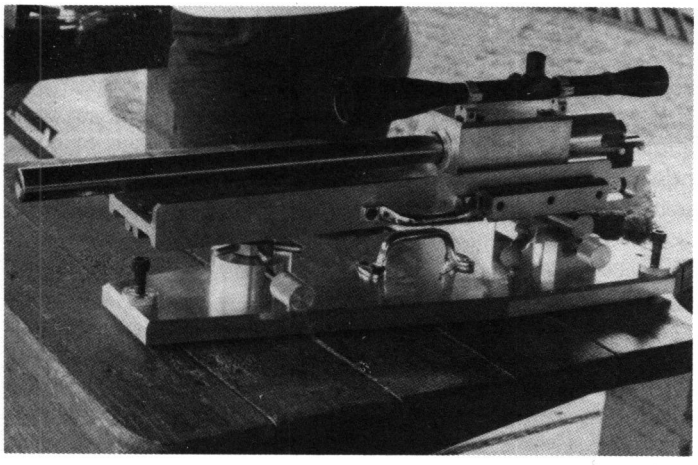
his ad in P. S. Bud's rig runs $1400 and is of excellent quality. To this you will have to add some sort of action mounting block, or you could use a Kelbly action directly mounted to the rail, and of course a barrel, trigger and scope. It is patterned pretty much after Bill Hall's rigs. The base is 1 inch aluminum plate and the rail is an aluminum I beam. Most of the rest of the parts are stainless steel, including the screws that rest on the bench, which include hardened steel points. A locking sighter cam is included. I have enclosed several pictures of Bud's rig also, without barrel, action and scope.

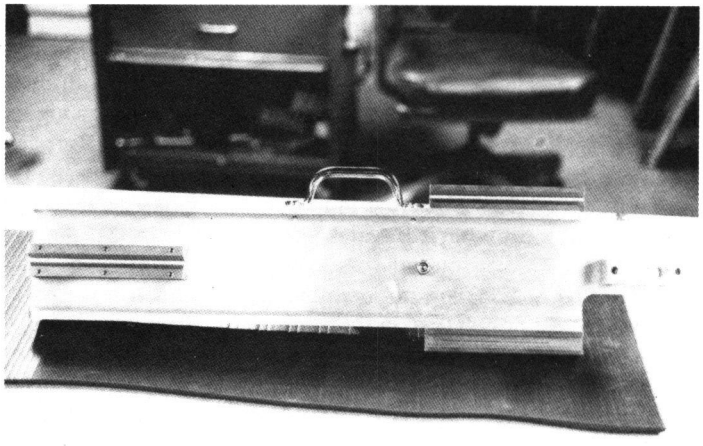
Other manufacturers include Clarence Hammonds, another P.S. advertiser, and Fred Hasecuster. You won't go wrong with any of these either.

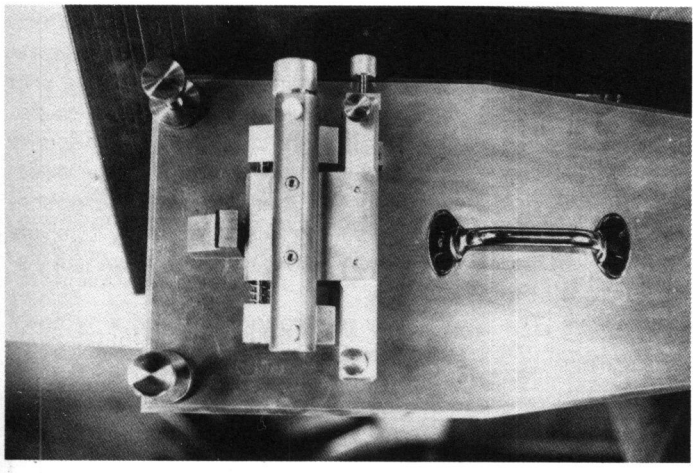
In the used market, you can expect to pay anywhere from $1000 up for a complete rifle. I would recommend staying with a one-piece rest type. You should probably ask to see pictures of the rig before you buy it. You should probably expect to have to do some work on any used piece of equipment, such as replacing the barrel, and maybe some action work. Don't be too concerned with whether it tracks perfectly as long as its point of aim always returns to the same spot when in the firing position.

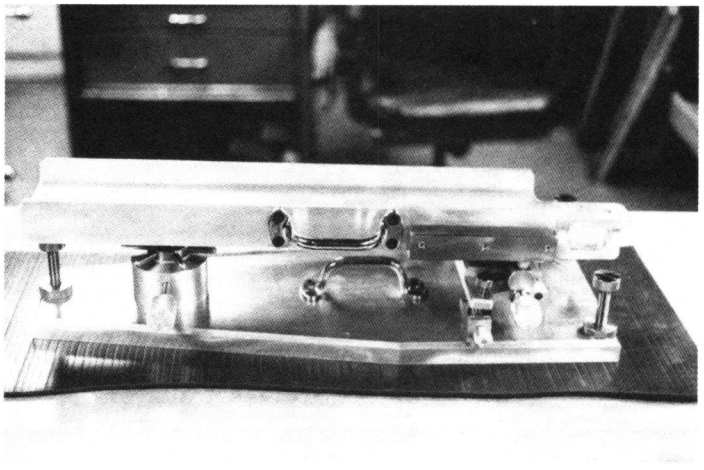
I hope this has been of some help to you. If you should have any specific points you would like to have addressed, please don't hesitate to write again.

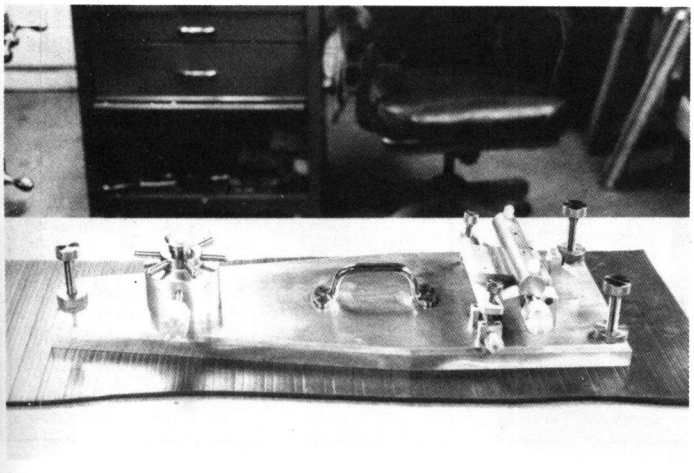
Sincerely,
Jerry Masker
123 Radcliffe Drive
Getzville, NY 14068

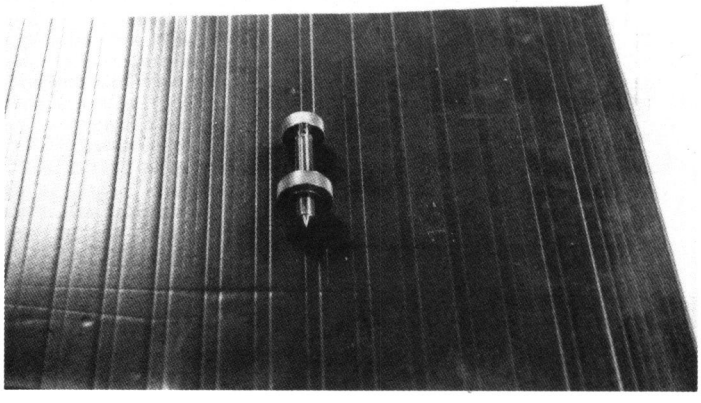












THE BLACK FOOTED FERRET; OPPORTUNITY KNOCKING?

by

Fred Zeglin

These days there is a great deal of ferver, regarding the environment. It's unfortunate that man has taken so long to recognize his stewardship of the environment and its many components. Recognition of these facts has spawned legislation, in an attempt to deal with past mistakes, i.e., The Endangered Species Act (ESA).

Reading the ESA, you quickly become aware that the intent of the law is to conserve endangered animals and plans in the wild. For this reason, animals in captive breeding or zoos are not counted as part of the wild population. In the case of the Black Footed ferret, the captive population is a management tool, used to reintroduce ferrets to their historical range and later to supplement wild populations. Many people would like to see the ferret remain in zoos. Provisions do exist for cases which are not practical, for economic or logistical reasons, and at the same time, the intent of the law is that a reasonable effort be made to establish the ferret in the wild.

another important facet of the ESA, is the definition of "Critical Habitat," to paraphrase, "Critical Habitat" is made up of specific areas within a geographical area occupied by that species. Establishment of "Critical Habitat" requires a lengthy process including public comment. According to the ESA, "Critical Habitat" may not include an entire geographical area. In other words, it is virtually impossible to close down an entire region or state, to protect one species, thus, the sky is not falling.

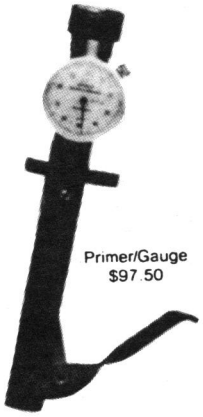
Reintroduction of the Black Footed Ferret is required by the ESA. The International Varmint Association has had representatives in attendance at meetings concerning ferret reintroduction, in Malta, MT and in South Dakota, at the invitation of the U.S. Fish and Wildlife and the Bureau of Land Management. These meetings included local ranchers, business persons, the Montana wildlife Council, the IVA, and others. Sportsmen and hunters *are* being included in the planning stages of the reintroduction program. The plan will spell out, that multiple use of the habitat including recreational shooting, is necessary for scientific study of the ferret, in the real world. Ron Crete of the U.S. Fish and Wildlife Service said, "There is no reason to restrict any activities that have not been shown to damage ferrets." The people working on reintroduction are well aware, that when the Black Footed ferret was rediscovered in Meeteetse, Wyoming, ranching and recreational shooting were present, and active. The ferret was thriving under those conditions, until disease intervened.

Most likely, the first experimental reintroduction will take place in Shirley Basin, or Meeteetse, Wyoming. Local public hearings must be completed and the site itself must be inspected, to insure the habitat will support the ferret. This process is the closest to being complete in these two locals. Ranchers are concerned that the program would allow prairie dogs to expand without control. The various agencies involved, have no intention of forcing private land owners to put up with prairie dogs on their land. Without the support of the people living in the reintroduction area the Black Footed ferret cannot survive, you can bet the U.S. Fish and Wildlife Service knows this. Agreements will be made with respect to prairie dog control and grazing rights. Control can take a couple of forms, poisoning, and recreational shooting. The International Varmint Association is requesting that it be notified prior to poisoning, whenever possible, so that varmint hunters can have an opportunity to control the prairie dogs. Better selective shooting than non-selective poisoning. Poisoning kills nearly every carnivore or carrion feeder in the area without discretion.

Why reintroduction, and why now? Scientists have learned all they can

Handloaders—Seat Primers for Accuracy!

And achieve it through uniform ignition by pre-loading the primer pellet exactly the same each time. The **exclusive** new K&M tools assure this by their unique design. The sensitivity ("feel") is optimized, and alignment between case and primer is straight-line to eliminate cocking of either component — primers are seated *squarely* and **to precise depth**. The **K&M Primer Deluxe** gives you these two seating features; the **K&M Primer/Gauge** also has an integral dial indicator which gages primer height and pocket depth (they vary!) and then allows you to see the seating uniformity. Both tools come with a Lee Auto-Prime shellholder of your choice. All steel construction. Bob Pease (of Bob Pease Accuracy) says "*. . . may well be one of the finest tools yet available to the accuracy-oriented shooter!*" Satisfaction guaranteed or money back. Add $3 shipping for each tool; PA residents add 6% tax. Send $1 for additional information on these and other accuracy-related tools. Send check or M.O. today to:



K&M Services P.O. Box 363-P, Emigsville, Pennsylvania 17318

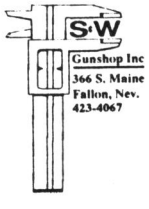
Also available from:
Whitetail Design & Eng. Ltd. — 9421 E. Mannsiding Rd., Clare, Mi. 48617
Bob Pease Accuracy — P.O. Box 310781, New Braunfels, Tx. 78131

25 Caliber Specialist

These are just three of the great wildcats I chamber for. 25/06 Ackley, 6/284 6.5 Ackley Roberts (260 AAR) I have lots of others and will split the cost on what I don't have.

I am also expanding to reline Winchester pump 22s

"Built with benchrest blood"
SASE for info



Ron Ryder
S&W Gunshop Inc.
366 S. Maine
Fallon, Nevada 89406
(702) 423-4067

about the Black Footed Ferret in captivity. A study of the Siberian polecat, a closely related species, is in progress in the wild, in China. These studies will help insure the success of the ferret in the wild. Common sense dictates that to learn more about Black Footed ferrets, reintroduction is a necessity. Further, any way you cut it, the ESA requires reintroduction to be attempted.

Downlisting is the act of removing an animal or plant from the Endangered Species List. No standard has been set for the ferret. It has been suggested, that when there are ten (10) populations of ferrets in the wild, with a total of fifteen hundred (1500) breeding adults, the Black Footed ferret would be evaluated for downlisting. A standard should be established before reintroduction takes place.

Genetic viability is in question, with the limited number of ferrets contributing to the breeding program. Presently, there are 185 ferrets in captivity. Inbreeding can produce oddities or birth defects in some animals. The effects of inbreeding are as yet unknown with regard to the Black Footed ferret. Each new generation of kits are watched closely, for defects. If problems develop, it may be possible to crossbreed with the Siberian polecat, to preserve the species. For the time being, however, it is hoped that the ferret can remain a pure species.

Early management of the prairies was naive, to say the least. Unfortunately, that leaves us with some tough decisions for wildlife management. Reintroduction of the Black Footed ferret is at the mercy of public opinion. As a citizen of the United States you are a steward of public lands and the wildlife that inhabits them. Collect all the available facts and develop an informed opinion, then share your feelings with the powers that be, *before* the program is in place. Educate your friends, and most important, educate your elected representatives.

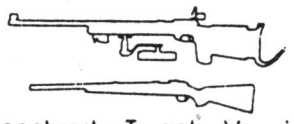
A battle for our hunting rights is probably inevitable. Anti-hunting groups have just as much right to input in these proceedings, as anyone. If they wait until the program is in place to attack our rights, we will already have the authorities on record, respecting recreational shooting as a necessary part of habitat management. Very likely, we will not be fighting government agencies, the attack will come from groups headquartered in places where, there are no prairie dogs, or Black Footed ferrets. Lets use our resources where they will be the most productive. Someone said, "An ounce of prevention is worth a pound of cure." That certainly applies here.

True, "You can't fight city hall," yet, for the first time in recent memory, we (the shooting public), have been *invited* to take part in the planning of a long-term program. Would it be wise for us to say, "It's a losing battle, why bother?" You have to agree, it's much easier to work within the system, than to fight it. By the way, the ESA provides that this program will be subject to a five year revue, which includes public input. The real fight won't be with city hall, keep your eyes on the horizon, there is a fire coming, and it's called, "ANTI-HUNTING."

RUSS HAYDON'S SHOOTERS' SUPPLY

815 S. 70th St. • Tacoma, WA 98408 • (206) 472-5507

Call Weekends or after 5 p.m. Pacific time



Benchrest • Target • Varmint

WILSON

Case Trimmer less case holder	$24.25
Case Holder - specify cartridge	4.35
Deburring Tool, .17 to .45	6.55
Inside Neck Reamer (use with trimmer) - specify caliber	13.95
Straight Line Seater	28.85
Extra Top Assembly for seater - specify caliber	12.25
Neck Sizer Die less bushing	28.95
Bushing - specify size	7.00

SINCLAIR

Primer Pocket Uniformer, carbide	32.50
Deluxe Flash Hole Deburring Tool	15.75
PPC Flash Hole Deburring Tool	15.00
Neck Turning Tool, dual caliber - .22 & 6mm, .25 & .270, or 7mm & 30	56.50
Mandrel, dual calibers as above	9.50
Mandrel, single .17, 6.5 or .338	8.50
Comparator - 6 cals .224, .243, .257, .277, .284, or .308	11.25
Scope Ring Lapping Kit, 1"	13.95
Chamber Plug - specify cartridge	8.95
Arbor Press	63.00
Cleaning Rod Guides - REM 700, WIN 70, or Ruger 77, .22-6.5 & .270 & up	11.95
Power Primer Pocket Uniformer, carbide, small or large	13.50
Neck Expander, same calibers as dual mandrels	22.25
same as single caliber mandrels	21.95

DEWEY MFG.

Nylon coated Rods complete with jag & brush adapter. (Jag only with .17 as no adaper required.)

.17 x 26"	19.50
.17 x 36"	21.50
.22 x 36"	19.95
.22 x 44"	20.15
.270 & up x 36"	20.50
.270 & up x 44"	21.15

Deduct $2.25 for .17 rod without jag, $4.50 for all other rods without jag & adapter.

6mm Jag for .22 rod	2.35
.17 Brass Core Bronze Brush	$1.15 ea.

Please send payment with order. Include ample shipping; overpayment will be refunded. All orders shipped UPS. Washington residents add 7.8% sales tax. Prices subject to change without notice. Limited number of used items available. SASE for complete price list.

PRO-SHOT

100% Cotton Flannel Patches

3/4" square 17 & 22 caliber	$3.75/500
1-1/8" square 22 cal. centerfire	3.75/500
1-3/8" square 6mm centerfire	4.00/500
1-3/4" square 6mm thru 30 caliber	5.00/500
2" round 30 thru 38 caliber	5.50/500
2-1/4" square 38 thru 45 pistol	8.00/500

Brushes, brass core with bronze bristles - .22 RF, .22 CF, 6mm, .25, .264, 7mm, .30, .338, .375, & .45 rifle; and .22, .38 & .45 pistol	$1.00 ea., $9.25/dozen
Bore Mops, brass core - .22, .24/27, .30/35, .38 & .45	$1.00 ea., $9.00/dozen

TULLER/PROTEKTOR SAND BAGS

No. 1 front hunting rifle	8.95
No. 2 front, 2½" wide forearm	8.95
No. 3 front, 3" wide forearm	8.95
Front Squeeze Bag	7.95
Rear Bag - specify bunny or rabbit ears	12.25
Bolt Holster	7.95
Brick Bag for elbow comfort	7.75

WHITETAIL DESIGN

Carbide Cutter for Wilson Trimmer	29.00
Lifetime Primer Pocket Cleaner, large or small	12.00
Match Prep Primer Pocket Uniformer, carbide - small rifle/pistol or large rifle	22.00

DAVIDSON

REM 600, Short 700 or 722 Single Shot Adapter - specify with or without tip-up (.222, PPC size requires tip-up)	6.00
REM 700 or 721 Single Shot Adapter	6.00
REM 700, 721, 722 Bolt Shroud, aluminum hard anodized, black	13.00
Bullet Puller, plier type (not for crimped-in bullets) .22 & 6mm	12.50
.22, 6mm & .308	13.50
Barrel Vise for switch barrel rifle	36.00
Loading Port Wrench for above Remington, Shilen and most Mausers; Hall or Stolle (call for avail.)	32.00
Mainspring Changing Tool	11.50

SOLVENTS & OILS

Accubore, 4 oz.	5.95
Hoppes #9, 2 oz.	1.75
Hoppes Bench Rest, 4 oz.	5.50
Hoppes Bench Rest, 16 oz.	14.75

SOLVENTS & OILS

Pro-Shot Copper Solvent, 4 oz.	$ 5.50
Pro-Shot Copper Solvent, 16 oz.	16.00
Shooters Choice, 2 oz., hand dropper bottle	3.10
Shooters Choice, 4 oz.	4.25
Shooters Choice, 16 oz.	13.75
Shooters Choice Rust Preventative Spray	2.85
Sweets 7.62, 8 oz.	6.50

WOLFF GUN SPRINGS - 2 types

Replacement springs for weakened spring, provide approx. 15% extra power. Recommend gunsmith replacement.

Anschutz 54/1400 series (wing safety)	7.20
Remington 37	7.20
Remington 540 & 580 series	7.20
Winchester 52, all series	7.20

Blitzschnell precision speedlock, ready for installation.

Anschutz 1800/1900 - 2 spring	8.95
Hall benchrest	7.20
Remington 700 short, 722	7.20
Remington 600-XP100	7.20
Winchester 70, all series & cal. except .22 Hornet	7.20

BENCHREST ITEMS

Acra-Gel	9.25
Acra-Gel with aluminum filler	12.50
Micro-Bed	8.00
Bushnell Bore Sighter	53.95
Adjustable Arbor for Bushnell Bore Sighter - specify .22-.270 or 7mm-.35	12.95
Bushnell Rings with windage	12.95
Chapman Screwdriver Kit	22.95
Loctite	6.50
Ear Plugs	3/1.00
K&M Flash Hole Uniformer, standard or PPC	9.50
Lee Auto-Prime, 2 trays	13.75
Shell Holder for Lee Auto-Prime - specify cart.	2.75
Redding 3BR Powder Measure	67.50
Shilen 2 oz. Trigger	87.95
Mirage Shade, mylar	2.95
7BR REM cases	6.20/20
6 PPC Sako USA	.81 ea.
Federal Nickel .222 Cases	6.75
Federal Nickel .308 Cases	8.50
Brass available in other calibers at discount prices — please call.	
Federal 205M, 210M	$21.50/1000
Remington 7½, CCI BR-2, BR-4 primers	$18.95/1000

SINCLAIR INTERNATIONAL

Dear Postal Participant,

The majority of shooters who participated in our postal match were not competition shooters and appeared to be the type of shooter who just wanted to have a little fun and gain a little knowledge.

Many shooters expressed interest in participating in more of this type shooting. With this in mind we would appreciate hearing from any interested shooter by way of the following questionnaire. Please feel free to add your comments, we are interested in any suggestions that you have.

Would you be interested in participating in future postal matches?	Yes ☐	No ☐
Would you be interested in joining an association for postal shooting?	Yes ☐	No ☐
Would you be interested in assisting with the administration of an association?	Yes ☐	No ☐
Would you be interested in assisting with the drafting of ground rules in regard to classification, target types etc.?	Yes ☐	No ☐
Should such an association require dues or should match target purchases cover any incurred costs?	Yes ☐	No ☐
Do you subscribe to the "Precision Shooting" magazine?	Yes ☐	No ☐

With what frequency should these matches be held? _____

Name: _____

Address: _____

City: _____ St. ____ Zip _____

Please return the questionnaire to me as soon as possible so that we can get an idea of the interest in these matches.

Sinclair International
718 Broadway
New Haven, IN 46774

9/10/90

Dave Brennan
37 Burnham St.
East Hartford, CT 06108

Dear Dave,

We want to thank you for the help and coverage of the postal match. Without your help it would not have been the success that it was.

We have received several inquiries regarding continued matches and some shooters expressed interest in participating in the administration. We have even received payment from some shooters.

Today we mailed the following questionnaire to all those who returned targets. We are hoping that this small sampling will give us a bit of insight into whether we should pursue future postal matches. We will keep you advised of the results.

One thought that has crossed our minds, should such matches continue, is to publish the actual target in the magazine along with the rules. Our thinking here is;

1. Have the target, with rules, printed in "PS". Target on one page and rules on reverse side.
2. The target could either be cut from the magazine or photocopied and then shot.
3. The shooter would then return fired target to the designated scorer, NOT "PS", who would tally the results. Score shooting only.
4. Results would then be published in "PS".

Realizing that the above would require at least two full pages in two issues of the magazine, a scoreing fee might be in order. Such a fee may, or may not, cover your costs.

We would greatly appreciate any suggestions you have.

Best Regards,

Fred & Eric

.22 RIMFIRE ACCURACY GAGE

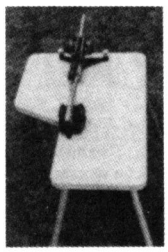
Because rim thickness variation affects accuracy, this gage permits measurement and segregation into more uniform lots. Inexpensive ammunition may be "improved," even match lots can be helped. Simply insert cartridge, slide bar until a reference reading is obtained. Available for standard S, L and LR rimfires or magnums — either is **$37.00** plus $3.00 shipping. Send **$2.00** for catalog of other items.

NEIL JONES CUSTOM PRODUCTS
R.D. 1 Box 483A, Dept. PS
Saegertown, Pennsylvania 16433
(814) 763-2769

MasterCard VISA

ARMOR SHOOTING BENCH

THE FINEST PORTABLE BENCHREST AVAILABLE.

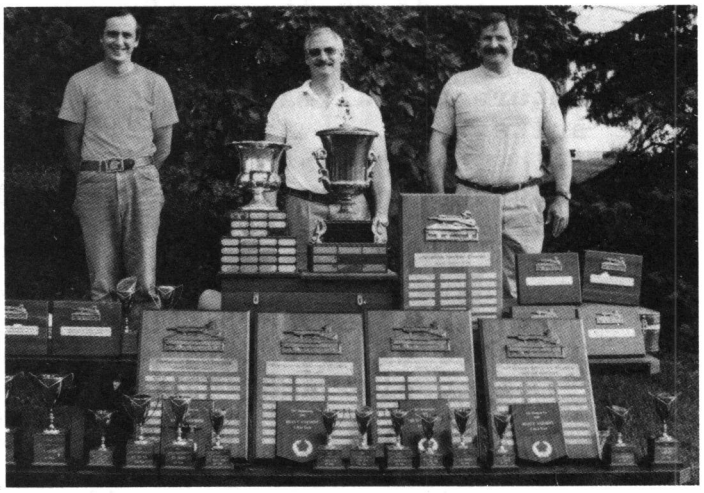


Heavy steel legs & rugged angled brackets. Large 1½" thick heavy top. 29"W x 44"L x 33" High. Easy setup. 3 Leg Model 55 lbs. $119.95. 4 Leg Model 65 lbs. $139.95. 3-4 Leg Combo Model 69 lbs. $149.95. Plus UPS. ARMOR METAL PRODUCTS, P.O. BOX 4609, HELENA, MT 59604. (406) 442-5560.

And Ye Shall Have Your Reward . . .

In the good old days . . . say about twenty-five years or so ago . . . all the traditional trophies for wins at the "Nationals" were massive, imposing . . . and a real stinker to transport home after winning the darn things. Add to this the fact that you had to bring it back . . . or ship it back . . . the following year to the site of the Nationals that year . . . to be given to the lucky winner that year. The editor can recall, in long gone by times, seeing winners presented with their temple-size trophies . . . posing briefly for the benefit of photographers and the admiring throng . . . and then attempting to give the traveling trophy back . . . to *ANYONE* . . . the awards announcer . . . the host of next year's Nationals . . . the guy they figured was going to win the award next year . . . the clubhouse janitor . . . like we said, *ANYONE*.

With the advent of the IBS, we had learned a great deal about how unwieldly these magnificent monsters were . . . and we went to "flat" traveling trophies . . . the kind that a lucky winner could pick up two at a Nationals award ceremony, one under each arm, do a hundred yard dash into his waiting Volkswagen beetle, enter the passenger side at twenty miles per hour, his wife/driver pops the clutch, and we're out of here . . . hellin' down the road for home, eight hundred miles away. Can't you get any more speed out of this beetle, Emma . . . I have to be at work Monday morning at 8:00 A.M.



At the 1990 IBS Nationals, Lee Euber won the two 10½ pound classes, Brian Hollister won the heavy varmint class, most of the multi-gun awards, most of the yardage crowns, and just about everything this side of the Ohio Lotto.

We thought you might like to see what you can pick up at a Nationals, if you have a hot gun, and steer it well.

Allie Euber is in the photos. It wasn't the best of Nationals for the former Benchrest Shooter of the Year . . . but there have been plenty of times when Lee had to help carry a lot of Allie's trophies to the car, after a Super Shoot or Nationals. What goes around . . . comes around. Right, Lee?

Almost forgot . . . Lee shot his way into the Hall of Fame at this match. Yep, it was a good week, all right!

(Photos courtesy of Myles Hollister.)

Jarrett Rifles Inc.

VARMINT & BIG GAME RIFLES BUILT TO BENCHREST STANDARDS

WE ADMIT THAT OUR RIFLES HAVE ONE FAULT . . .

. . . They make you dissatisfied with all your other rifles. We build to one standard, regardless of caliber, regardless of whether it's a varmint, beanfield, or big-game rifle, and that's the **Jarrett Benchrest Standard** that's set 15 world records. We do not work cheap, but 90% of the people who have bought one of our rifles have come back for a second, or more. If you'd like the pleasure of owning a rifle that's put together RIGHT, you can start by sending $4.00 for our information package.

Kenny Jarrett; **Jarrett Rifles, Inc.**, 383 Brown Rd., Jackson, S. Carolina 29831
TEL (803) 471-3616 — FAX (803) 471-9246

WALT BALCH

Dear David:

I desperately need your help and the help of every shooter that attended the Strange Duck Match this year. It seems as though the results for the Sporter event of that match were never received by any of the shooters that were present, at least the shooters that I talked to and from the result list that I received through the mail. I'm looking for anybody that has complete knowledge of the Sporter event, I don't mean just the top twenty, I have those results. If any of you Shooters out in there have these results would you PLEASE send a copy of them to Walt Balch; 59 S. Branch; Northfield, IL 60093.

These results are needed to insure that each shooter that attended this match receives the full amount of points that are due him in the All-Stars Shooting Program for this year. If I do not receive a copy of these results the scores for this match will stand as they are now posted. Which is points for the Heavy Varmint class only. I'm sorry that it has to be that way but that's how the powder trickles.

Sincerely,
Walt

KELBLY, INC.

Manufacturers of - - - -

— *the Stolle Panda, Polar, Kodiak, and Teddy Actions*

We are now making 30mm scope rings to fit Stolle actions and Davidson bases.

We also provide a wide range of gunsmithing services, including chambering and complete rifles.

7222 Dalton Fox Lake Road
No. Lawrence, Ohio 44666
(216) 683-4674

WANTED

40-X ACTIONS, STOCKS, and RIFLES.
Bob Pease
POB 787, New Braunfels, TX 78131.
AC 512 625-1342 afternoons

B-SQUARE TOOL SPECIALS

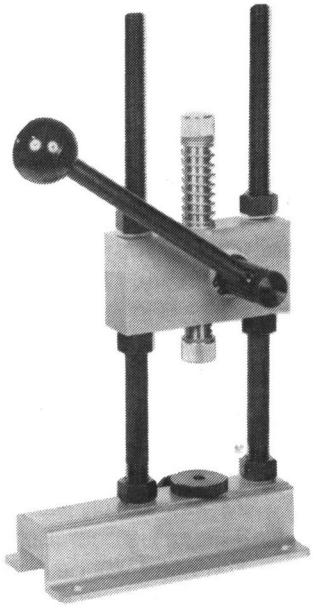
Super Mag Arbor Press

B-Square's super mag arbor press for precision reloading and industrial use has twin posts for "no-spring." All the load is between the posts. It easily resizes all caliber brass.

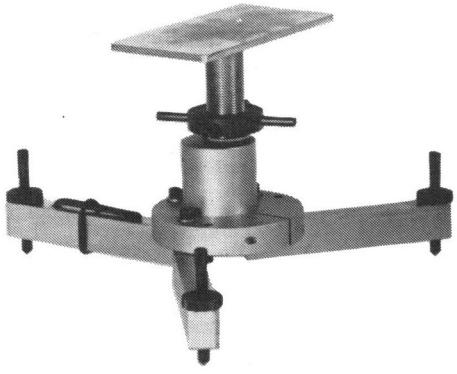
The press head is fully adjustable up and down on threaded posts for secure positioning. The ram, with replaceable brass caps and spring return, has over a 1-inch stroke. The handle is adjustable and the press can be used right- or left-handed.

Lightweight and portable for range use, this press will be a welcome bench rest loading tool. It's rated approximately 1 ton.

$79.95 + $3.50 for shipping.



Folding Rifle Rest



B-Square's rifle rest makes the perfect portable rest. It fits into a 4"x4"x10" box, and the legs unfold to a 13" diameter with 4-8" height adjustment.

The 8 pound professional fullsize rest features hardened leveling screws, a spoked height adjustment wheel and split clamp housings for rigidity.

$69.95 + $3.50 for shipping.

B-Square Precision Shooting Accessories

available from:

- **BOB PEASE ACCURACY**
  P.O. Box 310787, Zipp Rd.
  New Braunfels, TX 78131-0787
  (512) 625-1342
- **CUSTOM PRODUCTS**
  RD No. 1, Box 483, Saegertown,
  PA 16433. (814) 763-2769
- **SINCLAIR INTERNATIONAL**
  1200 Asbury Dr., New Haven,
  IN 46774. (219) 493-1858
- **HEINZ HENKE**
  Loenstrasse Postfach 1141,
  D-4476 Werlte, West Germany.
  5951/2729. FAX 5951/2727

B-SQUARE CO. P.O. Box 11281, Fort Worth, TX 7611C

Question of the Fortnight

Dear Dave,

Hi! I am one of your more faithful readers, and thought I'd seek your advice on a couple of questions, if you don't mind. I am looking for the "ultimate deer/silhouette cartridge" (for my purposes), and I seem to recall that you are a wildcat buff. I thought I'd drop you a line and see if you were aware of a cartridge that would fit the criteria that I've set. If so, it could save me "re-inventing the wheel," as I have very little access to any reliable data on wildcats.

I have been using a 7x57 with good success for several years, and it has come time to rebarrel it. I enjoy the 7x57 because of its efficiency—2940 fps (chronographed) with 45.0 gr. IMR 4320 and 139-gr. Hornady, in Sako brass. I have been looking at the .250-3000 Savage, which appears to be a similarly efficient cartridge, using about 35 gr. powder to get about 2500 fps with 120-gr. bullets. My problem, however, is that I lack faith in .25 caliber bullets, and would prefer a bit more velocity. I had wondered about the possibilities of using a .250 Savage necked up to 7mm, until reading an article on the ".30SP" in *Best of P.S.* (p. 121). This appears to be ballistically all I'd need, but is .30 caliber and may be relatively hard to form brass for. The author states that it has about 46.0 gr. (of water) case capacity; I measured the capacity of a (fired) 250-3000 case, and got about 40 grains capacity, so apparently it wouldn't achieve the desired ballistics.

My goal is to find a wildcat which:

1.) yields a realistic 2600 fps. (minimum) with the 7mm. 139 gr. bullet, using no more than 36 grains of powder, in a 22 inch barrel;
2.) is relatively easy to form brass for;
3.) can be chambered by a benchrest gunsmith and can be fitted with dies as inexpensively as possible.

The rifle I will be using is a Mod. 70, post-64, which started life as my current 7x57. I will also be rebarreling a pre-64 model 70 action eventually, in standard 7x57 cal., to use on hunting trips where wildcat ammo would be a drawback, from a logistics standpoint. Is there are particular gunsmith you can recommend to do these jobs well, without charging outrageous fees?

Please don't go to any trouble about this inquiry—I feel sure you manage to find enough to keep you busy without my help. However, if you are aware of such a wildcat, and if is isn't too much trouble, I sure would appreciate hearing your recommendations, as I don't otherwise know where to get this sort of info. Accuracy shooters around here are mighty scarce!

Again, thanks for your time and consideration in this matter! I have thoroughly enjoyed your work in P. S. since I began subscribing in 1985, and I certainly appreciate all your efforts on behalf of the sport! Shortly after starting to read P. S., I dropped my subscriptions to all other gun magazines, as I had been tired of the same old, non-empirical hogwash they recycle, year after year. Thanks for doing an excellent job!

Sincerely,
John H. Feamster,
5100 - 36th Ave. E., #2507
Tuscaloosa, AL 35405
(205) 556-1004

CLAY SPENCER

Benchrest Rifles
1,000-yard Rifles
Silhouette Pistols
Live Varmint Rifles
High Grade Hunting Rifles
Benchrest Handguns (as seen in *American Handgunner*, May/June 1990)

SPENCER'S CUSTOM GUNS

Home of the BC's 6.5 7mm 30
Rt. 1, Box 546, Scottsville, VA 24590
(804) 293-4922

R.F. Mitchell Bullets
Premium Match Grade

- 6mm, 10 Ogive with sufficient bearing surface for excellent stability during tough conditions.
- avail. in 66 gr. & 68 gr. F.B.
- **R.F. Mitchell** bullets are handcrafted in carbide dies by Simonson, using only the finest jackets, lead cores, and lubricants. Stringent quality control standards are maintained.
- $11.00 per box of 100
- $10.50 per 100 in bulk packs of 1,000
- telephone orders are accepted
- shipping costs invoiced

R.F. Mitchell Bullets
430 Walnut Street
Westernport, Md. 21562
301-359-0638

MATCH GRADE 6MM BULLETS

by
Brian Rubright

- Made in carbide dies.
- Your choice of boat-tail or flat base styles.
- Choice of bullet weights; 62.5, 65.0, or 68 grains.
- $10.50 per hundred. Shipping charges will be invoiced.

BRIAN RUBRIGHT
1008 S. QUINCE ROAD
WALNUTPORT, PA. 18088
(215) 767-1339

The Editor's Reply

Dear John,

I enjoyed the quandary posed by your letter . . . which is more than I can say for a few other quandaries that have crossed my desk lately.

Let's trace a bit of cartridge history back a bit of a ways . . . for no good reason . . . other than to help us differentiate the forest from the trees.

The venerable 7x57 has been around a heck of a long time . . . in my world, at least, an 1892 birthday, as well as involvement in the Spanish-American War (in which THEY were shooting it at US) . . . does qualify as "a long time." It's a mere two years from its centennial! It became the basis for an extremely efficient little wildcat, the 7x57 Improved. In the venerable "Handbook For Shooters And Reloaders," the late P. O. Ackley comments . . . "The improved 7mm is one of the better so called improved cartridges. Cases are made by simply firing factory loads in the improved chamber. It has almost ideal powder capacity for the 7mm bore, and produces very satisfactory ballistics. It is powerful enough for all North American big game when good bullets are used." His loading table that follows his narrative shows 45 grains of #3031 powder giving 3124 feet per second, although the barrel length is not specified.

In later years the late Ned Roberts would "invent" the .257 Roberts, by the simple expedient of necking down the 7x57 to .257 caliber. In turn, the .257 Improved is another fine little wildcat, both efficient and easy to form. A bastard child of all this was the .260 A.A.R. wildcat of the Apex Rifle Company ("all around rifle"). This wildcat is simply the .257 Improved, necked up to accept a 6.5mm bullet (or the 7x57 Improved, necked down, if you prefer). This one was a well liked cartridge by the late Warren Page.

Now both of these wildcats are a bit aged . . . and wildcatters have a liking for "the latest development." On the "modern" scene . . . we will pass by the 7-30 Waters . . . which does not give us the needed velocity with 140 grain bullets . . . and which is best suited for lever action rifles anyway. Frankly, I can't see going beyond the 7mm-08 Remington for your needs. It is no more than the .308 Winchester necked down to 7mm, and that wildcat has been around since roughly twenty minutes after the basic .308 hit dealer's shelves. But it has a number of virtues. It is commercially available . . . for those times when you're feeling lazy. It's able to be easily formed, from .308 Winchester, or 7.62 military, if you're of a mind. It easily meets your stated velocity wishes. It works through medium length actions (which I presume yours is). I see no good reason to go to the longer 7mm cartridges such as the .280 Remington, and most certainly none of the magnums, to accomplish your stated goals. And, finally, it may be merely a sign of advancing age, but the "fun" of a ten step cartridge forming chore now leaves me a trifle underwhelmed. This from a guy who, in his day, had every wildcat known to mortal man.

I hesitate to recommend a gunsmith, or at least a particular gunsmith. Virtually every one advertising in our pages is an accuracy smith . . . and many, many of them are my friends. It would be primarily a matter of contacting a few of them, and asking if they chamber for the 7mm-08 Remington. Don't let any of them try to talk you into a different cartridge . . . even if cartridge selection arguments are a lot of fun. Just remember one thing . . . I'm smarter than they are (don't quote me on this).

The Editor

Adjustable Shooting Stools

Solid Oak
Cadmium Plated Hardware
$39.50 plus postage

10% Discount to NBRSA or IBS Life Members

Tony Hidalgo
12701 S.W. 9th Place
Davie, Florida 33325
(305) 476-7645

Quantity discount available

BENCHREST GUN WORK ... OUR SPECIALTY

- Hart Products
- Actions — 4 styles
- Custom Made Benchrest Bullets
- Action Chamber Cleaning Tubes
- Arbor Press
- Primer Depth Reamer
- Reloading Dies
- Action Cleaning Tube
- Benchrest Pedestals — Comp. or Varmint
- Neck Turning Tool
- Flash Hole Deburring Tool
- Primer Pocket Tool
- Primer Seater
- Barrel Bench Vise
- Barrel Wrench
- Hart 2 oz. Trigger
- Cotton Flannel Cleaning Patches
- Brass Core Wire Brushes, Rifle & Pistol

ROBERT W. HART and SON, INC.

401 MONTGOMERY STREET
NESCOPECK, PENNSYLVANIA 18635

(717) 752-3655

FREE CATALOG (MAILED CATALOG — SEND $1.25 FOR POSTAGE)
DEALER INQUIRIES WELCOME — SEND CERTIFIED COPY OF FEDERAL FIREARMS FOR DEALER PRICES

1990
BENCHREST SHOOTING ALL STARS

PREPARED BY WALT BALCH

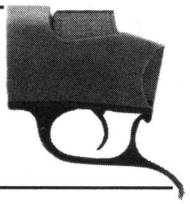
9/14/9

NAME	PLACE	POINT TOTAL	CACTUS CLASSIC	CRAWFISH INVIT.	SUPER SHOOT	IBS NAT.	NBRSA NAT	TACOMA WASH.	SAINT LOUIS	BOONE CO.	KANSAS CITY	HOLTON MICH.	STRANGE DUCK	IBS 200/300	SOUTH CREEK
HOEHN, R	1	1519	303	0	462	401		0	188	0	165	0	0	0	0
BOYER, T	2	1439	290	0	431	424		0	0	0	0	0	99	195	0
BRUNO, L	3	1435	313	0	282	441		0	0	0	0	0	82	176	141
KELBLY, G Sr	4	1431	252	0	267	326		0	160	0	188	174	64	0	0
HENSLEY, S	5	1400	264	0	424	442		0	0	0	0	0	89	181	0
HASECUSTER, F	6	1306	226	0	339	379		0	0	0	0	193	0	169	0
ROSENTHAL, B	7	1303	147	0	441	348		0	177	0	190	0	0	0	0
BERGER, W	8	1281	224	0	410	301		0	175	0	171	0	0	0	0
CANTWELL, T	9	1280	187	0	381	366		0	188	0	158	0	0	0	0
DEVILIEGHER, B	10	1274	0	0	464	421		0	0	0	0	0	87	167	135
NEILSON, D	11	1271	166	0	0	368		195	182	0	195	165	0	0	0
POWELL, D	12	1252	233	0	444	380		0	0	195	0	0	0	0	0
FREI, L	13	1176	294	0	471	411		0	0	0	0	0	0	0	0
BOOP, R	14T	1168	226	0	196	345		0	0	0	0	0	77	164	160
GAMMUTO, J	14T	1168	0	0	389	295		0	172	0	172	140	0	0	0
SCHARNHORST, L	15	1135	223	158	0	418		0	151	0	185	0	0	0	0
WHITE, BOB	16	1133	0	0	365	337		0	0	0	0	0	90	171	170
GENTNER, D	17	1123	209	0	0	464		0	0	0	0	0	76	180	194
OTTO, S	18	1116	183	0	238	311		191	0	0	193	0	0	0	0
HUCKEBA, C	19	1092	348	0	429	315		0	0	0	0	0	0	0	0
SUTTON JACK	20	1087	178	0	351	165		0	0	0	0	0	86	177	130
BERGER, E	21T	1044	0	136	281	295		0	158	0	174	0	0	0	0
EUBER, ALAN	21T	1044	0	0	463	409		0	0	0	0	0	0	172	0
JOHNSON, P	22	1043	0	157	431	274		0	0	0	0	181	0	0	0
MORTON, P	23	977	0	0	438	256		0	0	0	0	92	0	191	0
WATSON, E	24	970	0	0	374	424		0	0	172	0	0	0	0	0
NEWICK, G	25	965	0	214	352	399		0	0	0	0	0	0	0	0
BRAWAND, B	26	956	0	0	276	275		0	0	0	0	0	71	182	152
OLIVER, JIM	27	953	0	0	366	232		0	0	0	0	0	0	173	182
BROWN, J Jr	28	931	0	0	410	320		0	0	0	0	0	53	148	0
BULLOCH, B	29	925	263	215	447	0		0	0	0	0	0	0	0	0
FORYS, G	30	923	0	189	0	371		0	190	0	173	0	0	0	0
GRIFFIN, R	31	917	250	0	251	244		0	172	0	0	0	0	0	0
BAGGETT, L	32	896	305	196	395	0		0	0	0	0	0	0	0	0
DILL, R	33	893	0	0	418	252		0	0	139	0	0	84	0	0
EUBER, LEE	34	875	0	0	430	445		0	0	0	0	0	0	0	0
BOYER, F	35	862	234	0	369	0		0	0	0	0	0	96	163	0
VALENTINE, J	36	857	0	132	410	315		0	0	0	0	0	0	0	0
FEDOROWICH, J	37	855	0	0	402	289		0	0	0	0	164	0	0	0
HAMMONDS, C	38	843	0	0	380	463		0	0	0	0	0	0	0	0
DAUGHERTY, D	39	837	0	0	296	366		0	0	175	0	0	0	0	0
TUCKER, C	40	836	289	183	364	0		0	0	0	0	0	0	0	0

S.D. MEACHAM TOOL & HARDWARE, INC.

- presents the Hoch Single Shot Falling Block Action in Kit form, designed for cast bullet target shooting. For further information, send $1 for brochure. Kit available now.

Route 2, Box 27, Craigmont, Idaho 83523



Remington 7.62X39 Brass with small primer pockets reformed to 6 PPC, @ $0.20 each plus case:
Jack Lewis, Rt. 3 Box 109B
SnowHill, Md. 21863
(301) 632-1583

1990
BENCHREST SHOOTER OF THE YEAR

PREPARED BY WALT BALCH

9/14/9

Name	Place	Total Points	Cactus Classic	Crawfish Invit.	Super Shoot	IBS 200/300	IBS NATIONALS
Lee Euber	1	108	0	0	0	0	108
Brian Hollister	2	58	0	0	0	0	58
Gary Conaway	3	54	0	0	0	0	54
Gary O`Cock	4	50	36	0	0	14	0
Tony Boyer	5	43	0	0	22	21	0
Lowell Frei	6	34	1	15	12	0	6
Alan Euber	7	30	0	0	30	0	0
Lester Bruno	8	30	24	0	0	0	6
Norm Dixon	9	30	0	0	30	0	0
Paul Mitchell	10	30	0	0	30	0	0
Ed Watson	11	30	0	0	0	0	30
Perry Morton	12	27	0	0	6	21	0
Don Gentner	13	23	0	0	0	1	22
B. Bulloch	14	20	0	20	0	0	0
Barry Sullenberger	15	20	0	0	0	20	0
Charles Gough	16	20	0	0	0	0	20
Glenn Newick	17	18	0	18	0	0	0
Duncan Daughtery	18	18	0	0	0	0	18
John Chrisman	19	17	0	0	0	5	12
C. Hammonds	20	16	0	0	0	0	16
Skip Otto	21	12	0	0	0	0	12
Jeff Summers	22	10	0	0	10	0	0
Tony Peria	23	10	0	0	10	0	0
Don Nielson	24	10	0	0	0	0	10
Jack Sutton	25	9	0	0	6	3	0
R. Brunet	26	9	0	1	0	0	8
Boyer Faye	27	8	0	0	0	8	0
Butch Wahl	28	8	0	0	0	8	0
Dan Lilja	29	8	0	8	0	0	0
Ron Hoehn	30	8	0	0	8	0	0
L. Andrews	31	7	7	0	0	0	0
Larry Baggett	32	7	5	0	2	0	0
Tim Cantwell	33	7	0	1	0	0	6
C. Miller	34	6	0	0	6	0	0
Charles Huckeba	35	6	0	0	0	0	6
Don Powell	36	6	0	0	6	0	0
G. C. Schaefer	37	6	0	0	6	0	0
Jerry Johnson	38	6	0	6	0	0	0
Larry Englebrecht	39	6	0	0	6	0	0
Red Cornelison	40	6	6	0	0	0	0
John Brown Jr.	41	6	0	0	0	0	6

PRAIRIE DOG HUNTERS!
Revised guide with more towns, services, basics. Plus info on 1990 ANTELOPE HUNT, no drawing, hunt any day. Prairie dog, bird hunting & fishing on same permit. ***Prairie Dog Hunter's Guide—Montana '90.*** $14.95 + $2 shipping. C.W. Cornett, P.O. Box 9711, Fresno, CA 93793

SPECIALISTS in GUN CLEANING SUPPLIES for ACCURACY
100% Cotton Flannel Patches • Brass Core/Bronze Bristle Bore Brushes • Cleaning Rods • Spear Pointed Jags • Bore Guides • Action Tools • Cleaning Solvents • Gun Oil
Complete Line of Accessories from .17 Cal. - .45 Cal. Rifle
Pro-Shot Products, P.O. Box 396, Taylorville, IL 62568
Phone (217) 824-9133 FAX (217) 824-8861
Send or call for free catalog. Dealer inquiries invited.

TRADING POST

One man's "Junk" is another man's "Collector's Item!" Turn your surplus items into cash with a Trading Post ad. ORDER FROM THE ASSISTANT EDITOR, JOHN GAMMUTO. PLEASE NOTE: WE DO NOT ACCEPT CLASSIFIED ADS BY PHONE.

Groups of figures, abbreviations and initials count as words. Hyphenated word counts as two words. Name and address of advertiser is counted. Use full words instead of initials and abbreviations and make your meaning entirely clear.

Classified type ads: no display. **Rates:** 15 cents per word per insertion, prepaid. Minimum charge is $1.50. Closing date for ads is the 1st of the month preceding publication. To illustrate: we must have your ad copy in hand by August 1st to make the September issue.

WANTED: Anyone have a Davidson aluminum single shot loading ramp for a Rem. 788, 222 cal.? Roger (206) 788-4715.

FOR SALE: Ferguson Heavy Bench Unlimited. Complete—6PPC, Hart 1A action and barrel, Canjar, Unertl 36X. Gullwing Unlimited 6PPC. Shilen DGA action, Hart barrel, Canjar. Both with custom boxes. Both for $2000.00. Jerry Land (703) 273-4844.

FOR SALE: FDC Olympian .22 rimfire target rifle (Firearms Development Corp.), single shot action, Anschutz trigger, Shilen barrel, McMillan benchrest fiberglass stock, block bedded and painted red, white and blue "Stars & Stripes," extra bedding block. $1500 Bruce Buckner—(513) 542-3488.

FOR SALE: Targetech BR-50 .22 rimfire target rifle, by Larry Brown on Remington 581 barrelled action, sleeved barrel, Brown's muzzle brake cut off and barrel recrowned, silver-gray finished McMillan fiberglass stock with BR-50 logo, $500. Bruce Buckner—(513) 542-3488.

FOR SALE: USED PPC cartridge cases, mixed 22 and 6mm, all have 220 Russian headstamp, NO GUARANTEES, these cases may be useless but might be made to shoot again. 83 cases for $75. Bruce Buckner—(513) 542-3488.

WANTED: Ruger number 3 rifles or actions. Prefer those chambered for 22 hornet or 223 Rem. Call or write Pat Cameron, R.R. #1, Arthur, Ontario Canada, NOG 1A0, 519 848-3374.

WANTED: T/C bull barrels 10" in 45 ACP, 44 Mag, 357 Max, 38 Super, 22 Hornet, 256 Win Mag, 30 Carb, 45 LC, 32-20. For use, need not be new in box condition. Phil Mahoney, 67 White Hollow Rd., Lime Rock, CT 06039. (203) 435-9341 eves.

I am no longer making "steel" dies. Have several sets in .224 and .243 caliber in stock. Write for discount price. Bob Simonson, PO Box 277, Schoolcraft, MI 49087.

Sleeved Rem 70 actions for sale, one long, one short, magnum bolt faces, magazine filler blocks, tuned triggers, $350 ea. Details at (404) 907-0867.

1 Pratt Burnerd 6", 6 Jaw Setrite Scroll Chuck #1219-00365. N.I.B. cost $650 will sell for $550 plus shipping. 6000 Myles Hollister 10S 68 grain bullets, all same lot, sell only as one lot, $600 plus shipping. Don Geraci, (504) 878-6113.

New Leupold 36X scope $275, Leupold 12X duplex $175, Redfield 25X spotting scope $175, left-handed Kimber 22 K-Hornet with Leupold 3-9X compact $750, Sako Riikimaki 222 w/Lyman 6X $625, left-hand German Weatherby w/3-9X Redfield $850, left-hand 270 Weatherby w/3-9X Redfield $750, Heckler Koch Model 300 22 mag w/Leupold 2-7 compact $650, Winchester Model 62A 22 L.R. excellent condition $425. Call Jim (415) 351-2920.

Offset target sights for left eye aiming with rifle at right shoulder, custom made by Creighton Audette, fit standard Redfield base, $150 with walnut case. Contact Herb Aitken, (715) 832-6030.

MAGAZINE FOR SALE: Handloader #24, 28, 40, 41, 55, 65, 66, 87—$7.50 ea. #25, 58—$6.75. 47, 63, 71, 73, 77—$5.00. #5, 26, 34, 68, 96, 97—$4.00. 41, 44, 56, 82, 95, 99, 104—$3.00. 7, 27, 29, 30, 31, 33, 35, 36, 37, 43, 45, 46, 48, 50, 52, 53, 54, 57, 61, 62, 64, 81, 88, 90, 91, 100, 101, 102, 105—$2.25. 32, 38, 39, 59, 60, 67, 69, 70, 72, 78, 79, 80, 85, 86, 89, 92—$1.75. Excellent condition—many still in mailing wrappers all for $200 postage paid. James Nitsos, 6841 Castle Manor Drive, Indianapolis, IN 46214.

OPTICAL SERVICES CO.

60% POWER INCREASE FOR AMERICAN MADE TARGET SCOPES, 75$, WEAVER T SCOPE BLUE PRINT 45$, T-6 REDIAPHRAM FOR PARALLAX CORRECTION AND INCREASED RESOLUTION (BLUE PRINT + 10$), IN-STOCK LEUPOLD AND WEAVER DOTS 45$, SPECIAL ORDER RETICLES 55$, CUSTOM WORK (CALL FOR QUOTE). WE BUY/SELL WEAVER T'S.

BILL ACKERMAN
10236 WOODWAY
EL PASO, TEXAS 79925
915 592-5338

Barrels By Shilen

The Broadest Selection Available to Hunters and Competition Shooters

For almost thirty years we have been privileged to serve sportsmen throughout this country, and the world. Shilen barrels are button rifled with 8 lands and grooves, (see below for exception), and each is crafted under the personal supervision of Ed or Doug Shilen.

SPORTER BARRELS
- .17 to .458...including .416's!
- choice of twist rates
- several profiles and weights
- chrome-moly or stainless

COMPETITION BARRELS
- .17 to .458 in chrome-moly; .17, .22, 6mm and .30 in stainless
- several profiles and weights

PLUS
- Special High Power Silhouette barrel
- Special Fast Twist barrels in .22, 6mm and .30 for new heavyweight match bullets
- .4 and 6 groove barrels in .22 and 6mm

We also provide a Diagnostic Service for "sick" rifles....and a full line of handgun blanks for gunsmiths.

Send today for information.

SHILEN DGA RIFLES

SHILEN RIFLES, INC. 205 Metro Park Blvd. Ennis, TX 75119
214 875 5318 FAX 214 875 5402

GIFT SUBSCRIPTION FORM

Precision

SHOOTING

Dealing exclusively with the topic of extreme rifle accuracy

As a current subscriber, you know the value of a subscription to *Precision Shooting*. It is, and has been, one of the essential publications for the serious accuracy shooter over the years.

Recent national surveys have clearly established:

— In event of a serious fire at their homes, 72.5 percent of our subscribers would save their library of PS issues before their spouse, their bank book, or their first edition of Mickey Spillane novels.

— More of our readers chose, as their idea of a great evening . . . the new issue of PS arriving, a bag of microwave popcorn, a glass of chablis, and a fire in the fireplace . . . than mentioned Michelle Pfeiffer.

Why not take the time now to share the pleasure of being a *Precision Shooting* subscriber.

The holidays are fast approaching. Give a PS subscription, and if we receive your order by November 15th, the December issue will start off the receipt of 12 issues of *Precision Shooting* for your friend or loved one.

And . . . we will send your chosen recipient an appropriate acknowledgement of your holiday gift.

1 year — $20.00 2 years — $36.00

Gift to:

_____
Name

_____
Address

_____
City State Zip

Gift from:

_____
Name

_____
Address

_____
City State Zip

Send to: Stella Buchtel, 5735 Sherwood Forest Drive, Akron, Ohio 44319

TcL TRANSCONTINENTAL HUNTER League - National Conference

1990 T.C.L. NATIONAL CHAMPIONS
SAN JUAN NEW MEXICO CLUB

HOLY

LEROY RANSOM	30X44	250-14X
LYNN WOOD	30X44	250-14X
BILL THOMPSON	30X44	250-13X
HANK LICHTENBERGR	30X44	250-10X
DAN RANSOM	30X44	249-13X
EXCEPTIONAL SHOOTING!		1249-64X

COW !

NORTHWEST DIVISION CHAMPIONS
Entiat, Washington

Elzie scott	.308	250-14X
Bill Small	.308	250-13X
Jim Fugeta	.308H	250-12X
Bob Whitehall	.308	250-11X
Verne Johnson	.30HC	249-12X
		1249-62X

CENTRAL DIVISION CHAMPIONS
St. Louis Benchrest

Guy Chism	30x48	250-19X
Clark Green	30x47	250-15X
Joe Hemkens	30x48	250-14X
Larry Smart	30x47	249-12X
Ren Smith	30x47	249-11
		1248-71X

1990 WILDCARD CHAMPIONS
Louisiana Cajuns

Mark Vincent	6HLS	250-11X
Charles Braught	30x47	249-12X
Weldon Laviolette	30x46	249-8X
Ray Perry	30SPH	248-13X
Louis Langlinais	30IHMS	247-9X
		1243-53X

EASTERN DIVISION CHAMPIONS
Dunhams Bay, New York

Chas. Fountaine	6x44	249-12X
Rocky Murray	6-250	249-8X
Dan Caruso	.308	248-10X
Mike Mastrianni	6x44	248-10X
Vince Morris	.308	246-8X
		1240-48X

TCL NEWS, by Bob Pease

The "POSSIBLE CLUB" this month recognizes Mark Vincent from the Cajuns, Guy Chism, Clark Greene and Joe Hemkens from St. Louis as well as Elzie Scott, Bill Small, Jim Fugeta and Bob Whitehall from the Entiat, Washington entry. The winners added Leroy Ransom, Lynn Wood, Bill Thompson and Hank Lichtenberger to the honor roll. The 1990 Award Buckles will be shipped within the next couple weeks.

I talked at length with Bill Thompson of San Juan about that club's surprise rise to stardom. No, they do not really shoot in a cave. First they turned their range to face dead north. Then they installed solid concrete shooting benches. Their third step was one MANY clubs could benefit from. New Mexico is sparsely populated and Hunter Class shooters do not abound. They set up their schedule with all shooters agreeing not to go on vacation when a match was scheduled. It worked and sincere congratulations for the advance dedication to Hunter Class and the TCL!

St. Louis and Entiat made superb efforts in shooting the scores they did though St. Louis was fearful theirs would not hold up. Entiat, feeling (not knowing) they had beaten St. Louis had the champagne chilling on ice. New Mexico said nothing and I was as surprised as anyone when their score sheet came in.

To their credit both the Cajuns and Dunhams Bay caught really windy days. In all it was a fine culmination to a good TCL Hunter Class season.

Once again continuing a fine tradition a TCL Hunter Class shooter won the NBRSA National Hunter Class Championship. Congratulations to GUY CHISM of the St.Louis Club! Great effort from a fine gentleman!

R. G. Robinett, Director
P. O. Box 72
Madrid, IA 50156
(515) 795-2906

TCL

Ameri-Con-News

American Conference, Transcontinental Hunter Rifle League

Terry Meyer, Co-Director
R. R. 1, Box 50
Thornton, Iowa 50479
(515) 998-2860

BLIND FREDDY MOB		BLACK STUMP MOB		BUSH MOB		IN IT MOB	
Mainville	4-0	Golden	4-0	LaGrande	3-1	Van Dyne	3-1
West Texans	3-1	Tri-County	3-1	Dakota	2-2	Cent. Tex. N.	1-3
Blue Grass	3-1	North. Colo.	2-2	Red Lodge	1-3	Richmond	1-3
Minnetonka	3-1	Bald Eagle	0-4	Buffalo	2-2	Cody	1-3
Holmen	0-3					Prairie Dog	0-4

Blind Freddy should be proud of his Mob! Collectively, the division (named after the sightless one) compiled a 14 win and 6 loss season. The Black Stumpers also posted a winning record: 9 and 7. The Bush Mob, kept busy stomping out fires, broke even at 8 and 8. Meanwhile, the In It Mob suffered through a 6 win and 14 loss debacle.

"The Pack" claimed a division title via a 4-0 record, while amassing 4,954 points and 202X. Mainville nipped Cody with well-worn fangs in the regular season finally – a two-point margin was provided by Vince Pastorella and Randy Fritz (the infamous 30/30 again), respectively, 250-15X and 250-13X. Chuck Baraby lobbed a 250-11X (.30 short Chuckie) down range in a valiant effort for Cody, Wyo., but the cowboys fell short. Mainville 1241-56X; Cody 1239-44X.

Golden used a methodical and consistent approach to secure a 4-0 record and the right to perch upon the Black Stump and gloat all winter. The Dakotans nearly pulled off an armed robbery, but Harrold and his deputies prevailed 1221-30X; Dakota 1217-33X.

In the wet midwest, Van Dyne suffered a bitter defeat at the hands of Buffalo, thus ended the regular season at 3-1. The "Sure Bet" had clinched the "In It" title after the third match. As noted in Jerry Coons' match report, "Perfect day for shooting – partly cloudy and very little wind)did Deckert stop talking or what) – best day we have had all year . . . and one of our best turnouts!" . . . Buffalo 1231-40X; Van Dyne 1215-29X.

LaGrande went into the final match gloating over a league leading point total and their resultant 3-0 record. The Beavers had felled some tall timber – No. Colorado and Cody, Wyo., – they were getting down right uppity! Larry Cribbs phoned in the Beavers adios . . . 1239-58X . . . on the very day that the Vikings were shooting their last match for 1990. Larry told Donna (she's allowed to answer the phone in my absence), "We beat you! Ha Ha! Again, Larry began at the end 245-10X; 247-10X; 247-11X; 250-13X; 250-14X Whow!

Mike Prokosch has tried everything to get his Vikings to behave like animals; fed us raw meat, starved us, swore us to celibacy, swore at us – but on this day, Mike threatened to withhold our grog – our spark of life, our last link to barbarism . . . the final edict – get rowdy or get sober – pillage or perish! Al Cottrell, 246-9X; Terry the Terrible, 247-9X; Randy Robinett (Shooting a new 6JBC & H-380) 249-7X; Mike Prokosch, 249-8X; Mike Bigelow, 249-12X; 1240-45X! The Vikings have been "groggy" ever since, and I suspect the Beavers may be soon!

The regular season "250 Stuff" looked pretty sorry drifting through the sage but the "stuff" got all spruced up for the closer: the afore mentioned 250's by Pastorella, Fritz, and Baraby, were accompanied by like efforts by Larry Cribbs and Larry Bryant, LaGrande, and Rocky Baptiste, Tri-County.

Special mention is in order for Joe Scidmore, Bald Eagle, MN – Joe shot a 245-8X, thus relegating Mike Prokosch to Co-pilot status – looks like Joe is ready for a serious rifle.

For Hunter Rifle Competition
R. G. Robinett

The 1990 Shoot Off

Mainville, LeGrande, Golden, Van Dyne, and the Wild Card . . . Tri County.

Stay tuned for the third annual Americon wrap up report – send your photos NOW!

IBS News

Edited by Dave Brennan

1990 IBS NATIONALS

Dunham's Bay continues 1990 dominance. Ed Watson (heavy bench class) only exception. Lee Euber and Brian Hollister rule varmint classes.

The 1990 IBS Nationals, held at Kelbly's Range, North Lawrence, Ohio on August 20-25th had a good turnout of shooters, good weather, and some pretty good shooting by a number of the competitors.

The 100 yard stage of the heavy bench class started things off, and **DUNCAN DAUGHERTY**, of Huntington, West Virginia surprised himself by winning the yardage crown, with a .2392 aggregate. John Brown was rather close on the Daugherty heels, with a .2396 figure, and Skip Otto and Lee Andrews were the only other two shooters to make it under the quarter century figure for the shorter yardage. When the host club moved the target frames out another hundred yards, **ED WATSON**, of Greenville, South Carolina took a clear-cut win, with a .2207 200 yard agg. It was a good distance back to the second place figure of .2512,

TOP 20 COMPETITORS AT 100 YARDS IN THE HVY BENCH

53	DUNCAN DAUGHERTY	0.2392	1
92	JOHN BROWN, JR.	0.2396	2
112	SKIP OTTO	0.2456	3
80	LEE ANDREWS	0.2494	4
40	TIMOTHY CANTWELL	0.2500	5
70	BRIAN HOLLISTER	0.2502	6
67	BILL FORRESTER	0.2504	7
1	CLARENCE HAMMONDS	0.2556	8
61	K. L. MILLER	0.2646	9
86	RUSS BOOP	0.2676	10
7	LARRY ESTES	0.2686	11
3	ED WATSON	0.2700	12
68	PHIL SAUER	0.2754	13
82	DON GENTNER	0.2764	14
97	JOE VALENTINE	0.2768	15
115	BARRY DEVLIEGHER	0.2790	16
32	TONY BOYER	0.2818	17
19	JOHN DAVIDSON	0.2838	18
66	DWIGHT SCOTT	0.2850	19
56	JOHN CHRISMAN	0.2882	20

TOP 20 COMPETITORS AT 200 YARDS IN THE HVY BENCH

3	ED WATSON	0.2207	1
8	LOWELL FREI	0.2512	2
82	DON GENTNER	0.2535	3
1	CLARENCE HAMMONDS	0.2547	4
32	TONY BOYER	0.2579	5
7	LARRY ESTES	0.2700	6
40	TIMOTHY CANTWELL	0.2766	7
70	BRIAN HOLLISTER	0.2850	8
11	MANNY GARCIA	0.2900	9
33	ROBERT ADAMOWICZ	0.2942	10
86	RUSS BOOP	0.2954	11
68	PHIL SAUER	0.2971	12
97	JOE VALENTINE	0.2975	13
14	STEVE HAMILTON	0.2988	14
67	BILL FORRESTER	0.3039	15
61	K. L. MILLER	0.3051	16
41	DON POWELL	0.3072	17
78	PAUL JOHNSON	0.3124	18
29	LESTER BRUNO	0.3148	19
5	ROYE LECKEMBY	0.3171	20

TOP 20 COMPETITORS IN THE HVY BENCH

3	ED WATSON	0.2453	1
1	CLARENCE HAMMONDS	0.2552	2
40	TIMOTHY CANTWELL	0.2633	3
82	DON GENTNER	0.2649	4
70	BRIAN HOLLISTER	0.2676	5
7	LARRY ESTES	0.2693	6
32	TONY BOYER	0.2698	7
8	LOWELL FREI	0.2703	8
67	BILL FORRESTER	0.2771	9
86	RUSS BOOP	0.2815	10
61	K. L. MILLER	0.2848	11
68	PHIL SAUER	0.2862	12
97	JOE VALENTINE	0.2871	13
112	SKIP OTTO	0.2887	14
80	LEE ANDREWS	0.2965	15
33	ROBERT ADAMOWICZ	0.3017	16
19	JOHN DAVIDSON	0.3034	17
41	DON POWELL	0.3048	18
53	DUNCAN DAUGHERTY	0.3072	19
14	STEVE HAMILTON	0.3103	20

TOP 20 COMPETITORS AT 100 YARDS IN THE SPORTER

112	SKIP OTTO	0.1906	1
148	GARY CONAWAY	0.1970	2
53	DUNCAN DAUGHERTY	0.2004	3
70	BRIAN HOLLISTER	0.2146	4
75	LEE EUBER	0.2152	5
94	DON NIELSON	0.2168	6
104	EUNICE BERGER	0.2220	7
32	TONY BOYER	0.2224	8
46	ALAN EUBER	0.2238	9
111	GERRY MASKER	0.2260	10
174	JACK LESTER	0.2264	11
13	FRED HASECUSTER	0.2272	12
77	ALAN HALL	0.2284	13
115	BARRY DEVLIEGHER	0.2344	14
157	JAMES J. MAHER	0.2378	15
59	RICHARD C. LOCKWOOD	0.2400	16
79	JAMES HENRY	0.2436	17
179	PETE FRASK	0.2466	18
164	DAN LILJA	0.2474	19
16	LARRY SCHARNHORST	0.2480	20

TOP 20 COMPETITORS AT 200 YARDS IN THE SPORTER

82	DON GENTNER	0.1998	1
29	LESTER BRUNO	0.2180	2
143	WOODY ELLISON	0.2197	3
1	CLARENCE HAMMONDS	0.2237	4
35	RON HOEHN	0.2268	5
75	LEE EUBER	0.2356	6
6	PERRY MORTON	0.2398	7
3	ED WATSON	0.2430	8
18	GLENN NEWICK	0.2472	9
69	JOHN GAMMUTO	0.2486	10
32	TONY BOYER	0.2505	11
11	MANNY GARCIA	0.2547	12
85	LOU MURDICA	0.2573	13
16	LARRY SCHARNHORST	0.2578	14
175	RAYMOND BRUNET	0.2590	15
109	BILL AVERY	0.2595	16
115	BARRY DEVLIEGHER	0.2598	17
72	SMILEY HENSLEY	0.2624	18
10	BRAD ROSENTHAL	0.2638	19
148	GARY CONAWAY	0.2654	20

shot by Lowell Frei. At grand aggregate time, **ED WATSON'S** big 200 yard win, coupled with a 12th place finish at 100 yards, was enough to beat out steady shooting **CLARENCE HAMMONDS**, who put together a .2552 grand agg figure, by way of an 8th place finish at 100 yards, and a 4th place at 200 yards, but was not enough to handle the .2553 Watson grand agg.

The small group at 100 yards was a .128, shot by Skip Otto. Larry Estes, with a .335 target took the 200 yard small group award.

TOP 20 COMPETITORS AT 100 YARDS IN THE LT VARMINT

75	LEE EUBER	0.1768	1
36	CHARLES HUCKEBA	0.1992	2
67	BILL FORRESTER	0.2102	3
90	GERALD FORYS	0.2138	4
46	ALAN EUBER	0.2196	5
72	SMILEY HENSLEY	0.2226	6
80	LEE ANDREWS	0.2264	7
108	MIKE McGEE	0.2276	8
35	RON HOEHN	0.2330	9
122	ROGER AVERY	0.2334	10
148	GARY CONAWAY	0.2352	11
94	DON NIELSON	0.2368	12
109	BILL AVERY	0.2386	13
115	BARRY DEVLIEGHER	0.2460	14
159	GERALD ZUCHOWSKI	0.2472	15
92	JOHN BROWN, JR.	0.2478	16
3	ED WATSON	0.2496	17
82	DON GENTNER	0.2500	18
70	BRIAN HOLLISTER	0.2502	19
111	GERRY MASKER	0.2510	20

TOP 20 COMPETITORS AT 200 YARDS IN THE LT VARMINT

75	LEE EUBER	0.2173	1
56	JOHN CHRISMAN	0.2179	2
148	GARY CONAWAY	0.2212	3
40	TIMOTHY CANTWELL	0.2240	4
82	DON GENTNER	0.2336	5
10	BRAD ROSENTHAL	0.2476	6
16	LARRY SCHARNHORST	0.2479	7
1	CLARENCE HAMMONDS	0.2516	8
46	ALAN EUBER	0.2541	9
70	BRIAN HOLLISTER	0.2562	10
13	FRED HASECUSTER	0.2565	11
35	RON HOEHN	0.2580	12
55	AL SKIVER	0.2593	13
6	PERRY MORTON	0.2604	14
122	ROGER AVERY	0.2608	15
69	JOHN GAMMUTO	0.2609	16
9	NORM DIXON	0.2637	17
67	BILL FORRESTER	0.2644	18
111	GERRY MASKER	0.2648	19
68	PHIL SAUER	0.2663	20

TOP 20 COMPETITORS IN THE SPORTER

75	LEE EUBER	0.2254	1
148	GARY CONAWAY	0.2312	2
53	DUNCAN DAUGHERTY	0.2350	3
1	CLARENCE HAMMONDS	0.2364	4T
32	TONY BOYER	0.2364	4T
82	DON GENTNER	0.2397	6
35	RON HOEHN	0.2429	7
70	BRIAN HOLLISTER	0.2449	8
46	ALAN EUBER	0.2469	9
115	BARRY DEVLIEGHER	0.2471	10
94	DON NIELSON	0.2480	11
29	LESTER BRUNO	0.2487	12
112	SKIP OTTO	0.2503	13
16	LARRY SCHARNHORST	0.2529	14
6	PERRY MORTON	0.2545	15
18	GLENN NEWICK	0.2548	16
174	JACK LESTER	0.2566	17
10	BRAD ROSENTHAL	0.2597	18
104	EUNICE BERGER	0.2624	19
143	WOODY ELLISON	0.2637	20

The twin 10½ pound rifle classes at the 1990 Nationals could well have been labeled the Lee Euber Show, as you will see, good reader. Well, the sporter class started off with two shooters "in the teens"; **SKIP OTTO**, with a .1906, and **GARY CONAWAY**, with a .1970. Duncan Daugherty didn't miss by much, with his third place figure of .2004. At 200 yards two Pennsylvania shooters contested the yardage, and at the end of it was **DON GENTNER**, whose .1998 put him comfortably in front of **LESTER BRUNO'S** .2180. At grand agg time, there was

TOP 20 COMPETITORS IN THE LT VARMINT

75	LEE EUBER	0.1970	1
148	GARY CONAWAY	0.2282	2
56	JOHN CHRISMAN	0.2346	3
46	ALAN EUBER	0.2368	4
67	BILL FORRESTER	0.2373	5
82	DON GENTNER	0.2418	6
35	RON HOEHN	0.2455	7
90	GERALD FORYS	0.2469	8
122	ROGER AVERY	0.2471	9
70	BRIAN HOLLISTER	0.2532	10
109	BILL AVERY	0.2577	11
111	GERRY MASKER	0.2579	12
72	SMILEY HENSLEY	0.2599	13
9	NORM DIXON	0.2600	14
3	ED WATSON	0.2617	15
40	TIMOTHY CANTWELL	0.2619	16
1	CLARENCE HAMMONDS	0.2640	17
16	LARRY SCHARNHORST	0.2643	18
13	FRED HASECUSTER	0.2647	19
18	GLENN NEWICK	0.2667	20

LEE EUBER, with a .2254 grand agg, and first place, via a 5th place finish at 100 yards, and a 6th place finish at 200 yards. **GARY CONAWAY** was second in the grand agg . . . and as the match report goes on, good reader, you will see that Mr. Conaway, over the period of this month, collected more second place winners than anyone since the days when Lowell Frei made a career out of collecting second place trophies. Small group at 100 yards was a .094 by Lee Euber, and Lester Bruno took 200 yard honors with a downright small figure of .135.

At this point in the proceedings all the competitors put away their sporter rifles, and took out their light varmint class rifles. Several competitors were heard to remark, "I hope this darn gun is gonna shoot better now, as a light varmint rifle, than it did as a sporter."

LEE EUBER, in the light varmint class, won the hundred yard stage (his .1768 figure was substantially in front of **CHARLES HUCKEBA'S** .1992). Then, because he had so much fun winning that yardage, he turned around and won the 200 yard crown as

well, via a .2173 agg, which was just barely enough to nose out John Chrisman's .2179 agg. After Lee won both yardages, there were relatively few shooters asking "Who do you think won the grand?" **LEE EUBER** had a commanding margin win over second place **GARY CONAWAY**, with a .1970 and a .2282 respectively. The small group at 100 yards was an .074 by Larry Estes, and at 200 yards it was Smiley Hensley's .190.

In the heavy varmint class, the previously unheralded **CHARLES GOUGH,** of Clarksburg, West Virginia, won the shorter yardage with an .1880 agg. In second place was . . . well, go ahead and guess . . . take a name. (Hint . . . isn't that **GARY CONAWAY** with another second place trophy?) Gary had a .1944 agg, and **RAYMOND BRUNET** also was in the teens, with a .1994 agg. At 200 yards, **DON NIELSON**, from California, took the yardage title with a .2098 agg, ahead of Brian Hollister's .2137. At grand agg time it was **BRIAN HOLLISTER'S** day, however. Brian had a .2179 grand agg, **CHARLES GOUGH** was second with a .2226 figure, and **LEE EUBER** and **RAYMOND BRUNET** turned in identical .2316 figures for a third place tie. Bill Avery had a nice .064 for small group 100 yard honors, and Lee Dycus had a .223 for 200 yard honors.

TOP 20 COMPETITORS AT 100 YARDS IN THE HV VARMINT

62	CHARLES GOUGH	0.1880	1
148	GARY CONAWAY	0.1944	2
175	RAYMOND BRUNET	0.1994	3
16	LARRY SCHARNHORST	0.2110	4
29	LESTER BRUNO	0.2142	5
72	SMILEY HENSLEY	0.2154	6
161	JAMES F. BORDEN	0.2156	7
109	BILL AVERY	0.2172	8
46	ALAN EUBER	0.2194	9
76	BOB HART	0.2210	10
75	LEE EUBER	0.2220	11
70	BRIAN HOLLISTER	0.2222	12
10	BRAD ROSENTHAL	0.2224	13
49	HARLAN HOFFER	0.2248	14
32	TONY BOYER	0.2262	15
21	AL FAY	0.2268	16T
18	GLENN NEWICK	0.2268	16T
31	KEITH MELTON	0.2272	18
17	LOWELL HOTTENSTEIN	0.2326	19
13	FRED HASECUSTER	0.2352	20

TOP 20 COMPETITORS AT 200 YARDS IN THE HV VARMINT

94	DON NIELSON	0.2098	1
70	BRIAN HOLLISTER	0.2137	2
75	LEE EUBER	0.2412	3
55	AL SKIVER	0.2415	4
67	BILL FORRESTER	0.2422	5
30	DALE BOOP	0.2455	6
168	WILLIE BAUER	0.2528	7
47	DAN RASSIER	0.2563	8
62	CHARLES GOUGH	0.2573	9
175	RAYMOND BRUNET	0.2639	10
1	CLARENCE HAMMONDS	0.2723	11
72	SMILEY HENSLEY	0.2727	12T
32	TONY BOYER	0.2727	12T
29	LESTER BRUNO	0.2756	14
20	H. J. FEDOROWICH	0.2761	15
7	LARRY ESTES	0.2772	16
41	DON POWELL	0.2775	17
115	BARRY DEVLIEGHER	0.2802	18
34	RON DILL	0.2805	19
60	BILL ROWLEY	0.2808	20

TOP 20 COMPETITORS IN THE HV VARMINT

70	BRIAN HOLLISTER	0.2179	1
62	CHARLES GOUGH	0.2226	2
75	LEE EUBER	0.2316	3T
175	RAYMOND BRUNET	0.2316	3T
94	DON NIELSON	0.2375	5
148	GARY CONAWAY	0.2398	6
55	AL SKIVER	0.2429	7
72	SMILEY HENSLEY	0.2440	8
29	LESTER BRUNO	0.2449	9
32	TONY BOYER	0.2494	10
76	BOB HART	0.2517	11
17	LOWELL HOTTENSTEIN	0.2593	12
46	ALAN EUBER	0.2629	13
95	BILL DRYFIELD	0.2641	14
13	FRED HASECUSTER	0.2654	15
119	DAVID E. WAY	0.2655	16
146	DON JONES	0.2667	17
59	RICHARD C. LOCKWOOD	0.2671	18T
16	LARRY SCHARNHORST	0.2671	18T
115	BARRY DEVLIEGHER	0.2677	20

TOP 20 COMPETITORS IN THE TWO GUN GUN

75	LEE EUBER	0.2143	1
148	GARY CONAWAY	0.2340	2
70	BRIAN HOLLISTER	0.2355	3
46	ALAN EUBER	0.2498	4
72	SMILEY HENSLEY	0.2519	5
67	BILL FORRESTER	0.2586	6
175	RAYMOND BRUNET	0.2588	7
29	LESTER BRUNO	0.2594	8
82	DON GENTNER	0.2595	9
56	JOHN CHRISMAN	0.2610	10
55	AL SKIVER	0.2644	11
111	GERRY MASKER	0.2645	12
13	FRED HASECUSTER	0.2650	13
16	LARRY SCHARNHORST	0.2657	14
1	CLARENCE HAMMONDS	0.2666	15
18	GLENN NEWICK	0.2693	16
59	RICHARD C. LOCKWOOD	0.2708	17
3	ED WATSON	0.2717	18
115	BARRY DEVLIEGHER	0.2727	19
35	RON HOEHN	0.2731	20

TOP 20 COMPETITORS IN THE THREE GUN GUN

75	LEE EUBER	0.2180	1
148	GARY CONAWAY	0.2330	2
70	BRIAN HOLLISTER	0.2386	3
46	ALAN EUBER	0.2488	4
82	DON GENTNER	0.2529	5
29	LESTER BRUNO	0.2558	6
1	CLARENCE HAMMONDS	0.2565	7
72	SMILEY HENSLEY	0.2568	8
16	LARRY SCHARNHORST	0.2614	9
35	RON HOEHN	0.2630	10
115	BARRY DEVLIEGHER	0.2641	11
18	GLENN NEWICK	0.2645	12
175	RAYMOND BRUNET	0.2646	13
32	TONY BOYER	0.2677	14
59	RICHARD C. LOCKWOOD	0.2701	15
10	BRAD ROSENTHAL	0.2710	16
111	GERRY MASKER	0.2713	17
56	JOHN CHRISMAN	0.2728	18
94	DON NIELSON	0.2734	19
3	ED WATSON	0.2746	20

TOP 20 COMPETITORS IN THE FOUR GUN GUN

70	BRIAN HOLLISTER	0.2459	1
82	DON GENTNER	0.2559	2
1	CLARENCE HAMMONDS	0.2562	3
75	LEE EUBER	0.2570	4
3	ED WATSON	0.2673	5
32	TONY BOYER	0.2682	6
72	SMILEY HENSLEY	0.2705	7
29	LESTER BRUNO	0.2706	8
8	LOWELL FREI	0.2761	9
115	BARRY DEVLIEGHER	0.2787	10
16	LARRY SCHARNHORST	0.2824	11
35	RON HOEHN	0.2839	12
40	TIMOTHY CANTWELL	0.2842	13
67	BILL FORRESTER	0.2854	14
56	JOHN CHRISMAN	0.2870	15
111	GERRY MASKER	0.2875	16
18	GLENN NEWICK	0.2877	17
53	DUNCAN DAUGHERTY	0.2883	18
41	DON POWELL	0.2896	19
90	GERALD FORYS	0.2906	20

TOP 20—HEAVY BENCH CLASS

Shooter	Cartridge	Action	Barrel	Scope	Load	Bullet	Gunsmith
Watson	6PPC	Hall	Hart	Leu 36	28.0-T32	Watson 68	Hammonds
Hammonds	6PPC	Hall	Shilen	Leu 36	27.5-T32	Watson 68	Hammonds
Cantwell	6mm	Stolle	Shilen	Leu 36	— T32	Own 68	Speedy
Gentner	6PPC	Wichita	Shilen	Leu 36	29.0-GI322	Estes 68	Hammonds
Hollister	6PPC	Wichita	Hart	Leu 36	30.5-N201	Hollister 68	Hollister
Estes	6PPC	Polar	Hart	Unt. 36	29.0-GI322	Estes 68	Hasecuster
Boyer	6PPC	Wichita	Shilen	Own 36	30.0-N201	Euber 69	Hollister
Frei	6PPC	Hall	H-S	Leu 36	28.5-GI322	Frei 68	Frei
Forrester	22/37	Stolle	Hart	Unl. 50	23.5-T32	— 52	Hasecuster
Boop	6PPC	Hall	Hart	Leu 36	28.0-H322	Ruby 68	Weider
K. L. Miller	6PPC	Hall	Shilen	Leu 36	28.0-T32	Watson 68	Hammonds
Sauer	6PPC	Stolle	Pence	Unt. 36	28.0-322	Hotten 68	Sauer
Valentine	6PPC	Hall	Hart	Leu 36	27.0-T32	Berger 65	Hasecuster
Otto	6PPC	Stolle	Lilja	Leu 38	— T32	Watson 70	Self
Andrews	6PPC	Hall	Hart	Leu 36	26.7-T322	Euber 68	Sinclair
Adamowicz	6mm	Hart	Hart	Leu 48	— H322	Brawand 68	R&M
Davidson	6PPC	Wichita	Hart	Ly-Sie 40	27.5-I4895	Fowler 66	B. Hall
Powell	6PPC	Shilen	Hart	Leu 36	29.6-N201	Berger 68	Broughton
Daugherty	6PPC	Hall	Hart	Prem 40	28.0-322	Berger 68	Broughton
Hamilton	6PPC	XP100	Hart	Leu 36	27.0-GI322	— 68	Schimp

TOP 20—SPORTER CLASS

Shooter	Cartridge	Action	Barrel	Scope	Load	Bullet	Gunsmith
L. Euber	6PPC	600	McMillan	Ly-Sie 30	30.0-N201	Euber 68	Hollister
Conaway	6PPC	Hall	Shilen	Leu 36	28.0-H322	Schneider 68	Bell
Daugherty	6PPC	Stolle	Hart	Leu 36	28.0-322	Watson 62	Kelbly
Hammonds	6PPC	Hall	Shilen	Leu 36	27.5-T32	Watson 68	Hammonds
Boyer	6PPC	Teddy	Shilen	Own 36	28.0-T322	Euber 69	Hollister
Gentner	6PPC	Stolle	Shilen	Leu 36	28.4-GI322	Own 64	Hammonds
Hoehn	6PPC	Stolle	Shilen	Leu 36	27.5-T32	Hoehn 68	Hoehn
Hollister	6PPC	Stolle	Shilen	Ly-Sie 30	30.5-N201	Hollister 68	Hollister
A. Euber	6PPC	Hall	Gaillard	Leu 36	29.5-N201	Euber 68	Hollister
Devliegher	6PPC	Stolle	Hart	Prem 45	28.0-H322	Euber 68	Masker
Nielson	6PPC	Teddy	Hart	Leu 36	27.5-T32	Berger 68	Nielson
Bruno	6PPC	Stolle	Chanlyn	Leu 36	28.5-GI322	Bruno 64	Miller
Otto	6PPC	Stolle	Lilja	Leu 36	— T322	Watson 20	Otto
Scharnhorst	6PPC	Hall	Hart	B+L 36	29l1-H322	Berger 62	Hasecuster
Morton	6TD	Hall	Lilja	Prem 45	28.0-T32	Own 68	Hasecuster
Newick	6PPC	CPS	Hart	Leu 36	27.6-H322	Bruno 68	White
Lester	6PPC	Hall	Lilja	B+L 36	31.0-748	Berger 68	Hutcherson
Rosenthal	6PPC	Stolle	Hart	Leu 36	26.0-GI322	Euber 68	Dodd
E. Berger	6PPC	Stolle	Shilen	Leu 36	26.8-T32	Berger 65	Nielson
Ellison	6mm	Stolle	Hart	B+L 36	28.0-H32	Berger 68	Dowling

TOP 20—LIGHT VARMINT CLASS

Shooter	Cartridge	Action	Barrel	Scope	Load	Bullet	Gunsmith
L. Euber	6PPC	600	McMillan	Ly-Sie 30	30.0-N201	Euber 68	Hollister
Conaway	6PPC	Hall	Shilen	Leu 36	28.0-H322	Schneider 68	Bell
Chrisman	6PPC	Stolle	H-S	Prem 48	30.0-H322	Own 70	Self
A. Euber	6PPC	R&M	McMillan	Ly-Sie 30	30.0-N201	Euber 68	Hollister
Forrester	22/37	Stolle	Hart	Leu 36	23.5-T34	—	Hasecuster
Gentner	6PPC	Stolle	Shilen	Leu 36	28.4-GI322	Own 64	Hammonds
Hoehn	6PPC	Stolle	Shilen	Leu 36	27.5-T32	Own 68	Hoehn
Forys	6BR	Panda	Chanlyn	Leu 36	—	Fowler 66	Forys
Avery	6BR	Swndlhrst	MacLennan	Leu 36	28.5-T322	Own 68	Swndlhrst
B. Hollister	6PPC	Stolle	Shilen	Ly-Sie 30	30.5-N201	Hollister 68	Hollister
Avery	6PPC	Stolle	MacLennan	Leu 36	28.0-T322	Avery 68	Swndlhrst
Masker	6PPC	Stolle	Hart	Prem 48	29.5-N201	Hollister 68	Masker
Hensley	6PPC	40X	Shilen	Leu 36	27.5-T32	Euber 68	Hammonds
Dixon	6PPC	40X	Hart	B+L 36	27.5-H322	Hollister 68	Dixon
Watson	6PPC	Hall	Shilen	Leu 36	28.0-T32	Watson 68	Hammonds
Cantwell	6mm	Stolle	Hart	Leu 36	— T32	Own 68	Speedy
Hammonds	6PPC	Hall	Shilen	Leu 36	27.5-T32	Watson 68	Hammonds
Scharnhorst	6PPC	Hall	Hart	B+L 36	29.1-H322	Berger 62	Hasecuster
Hasecuster	6TD	Stolle	Hart	Prem 50	— T322	Own 68	Hasecuster
Newick	6PPC	CPS	Hart	Leu 36	27.6-H322	Bruno 68	White

TOP 20—HEAVY VARMINT CLASS

Shooter	Cartridge	Action	Barrel	Scope	Load	Bullet	Gunsmith
B. Hollister	6PPC	Stolle	Shilen	Ly-Sie 30	30.5-N201	Hollister 68	Hollister
Gough	6PPC	Stolle	Hart	B&L 36	28.2-H322	Estes 68	Self
L. Euber	6PPC	600	McMillan	Ly-Sie 30	30.0-N201	Euber 68	Hollister
Brunet	6PPC	Hall	Broughton	Leu 36	28.0-GI322	Euber 68	Self
Nielson	6PPC	Teddy	Hart	Leu 36	27.5-T32	Berger 68	Nielson
Conaway	6PPC	Hall	Shilen	Leu 36	28.0-H322	Schneider 68	Bell
Skiver	6PPC	Rem	Hart	Leu 36	28.0-H322	Demonstoy	Skiver
Hensley	6PPC	CPS	Hart	Leu 36	27.5-T32	Euber 68	Hammonds
Bruno	6PPC	40X	Hart	Leu 60	28.5-322	Brunp 68	Miller
T. Boyer	6PPC	Teddy	Shilen	Own 36	28.0-T322	Euber 69	Hollister
B. Hart	6PPC	Hart	Hart	Lym 30	27.5-H322	Hart 68	Hart
Hottenstein	6BR	Stolle	Shilen	B+L 36	28.0-T32	Own 68	Johnson
A. Euber	6PPC	Polar	McMillan	Leu 36	30.5-N201	Euber 68	Hollister
Dryfield	6PPC	Stolle	Shilen	Leu 36	— T32	Haber 70	Kelbly
Hasecuster	6TD	Stolle	Hart	Prem 50	— T322	Own 68	Hasecuster
Way	6BR	Stolle	Hart	Leu 36	27.3-T32	Berger 68	Kelbly
Jones	6PPC	Stolle	Shilen	Leu 36	27.0-H322	Own 65	Jones
Lockwood	6PPC	CPS	Hart	Leu 36	27.5-H322	— 68	Lockwood
Scharnhorst	6PPC	Hall	McMillan	B&L 36	27.5-H322	Berger 65	Sinclair
Devliegher	6PPC	Stolle	Hart	Prem 45	28.0-H322	Euber 68	Masker

IBS ANNUAL MEMBERSHIP MEETING

January 11 & 12, 1991

SHADOWBROOK RESORT
TUNKHANNOCK, PA
717-836-2151

AGENDA:

Friday Evening—January 11
Social Time in Sullivan Room
Soda, Beer, Coffe, Chips, etc.
Socializing & renewing friendships
6:00 P.M. until Midnight

Saturday—January 12
Membership and Board of Directors Meetings
8:30 A.M. until 7:00 P.M.

Open Membership Meeting
- Committee Reports
- Special Announcements
- Financial Report
- 1990 Championships
- 1990 Shoot Schedule

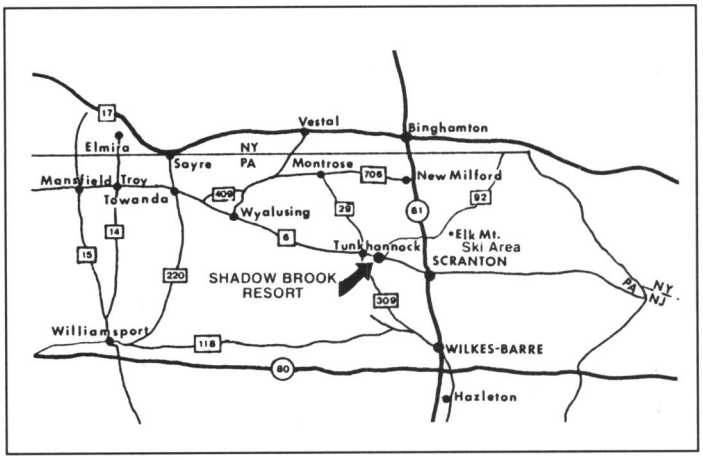
Old Business
New Business
- 1991 Agenda Items

Seminars
Adjourn

Breaks will be taken in morning and afternoon.

Other Motels:

Maplehurst (11 miles) 717-833-2121
Nichols Village (15 miles) 717-587-1135
Skyline (8 miles) 717-836-3145
Budget Inn (15 miles) 717-586-9100



Agenda Items for 1991

1. Modified Rule Book No. 8—Score Shooting—Section VI, Paragraph C, item 5 to read:

   Nothing may be fastened to the barrel except sights, sight bases, and original manufacturer's attachments, with the exception of tape, paper, plastic or similar material used for the sole purpose of deflecting heat waves.

Officers for Election

The offices of President and First Vice-President are up for election in 1990 for the terms of 1991/92. The following are the IBS nominated candidates:

President — Jim Oliver

First Vice President — Brian Hollister

Ballots will be mailed to all IBS members in early November. Write-in votes are permissable.

SELKIRK

The Selkirk (Canada) club hosted its annual Manitoba Buffalo Shoot on June 9th and 10th.

Light varmint class (17 shooters) 100 yards: 1.) Grant Schick .1988, 2.) Bernie Altenburg .2714 (now that's a fair "margin of victory"), 3.) Al Hiebert .2730. At 200 yards: 1.) Grant Schick .3992, 2.) Murray Benson .4643, 3.) Al Phillips .4730. Grand agg: 1.) Grant Schick .2990, 2.) Bernie Altenburg .3771, 3.) George (Corky) Holter .3842. The grand agg winner shot a 6PPC, Schick action, Krieger barrel, Leupold 36X scope, 28.3 grains of 61322 with Berger bullets. He smithed and stocked himself the winning rifle.

Heavy varmint class (17 shooters) 100 yards: 1.) Al Hiebert .2176, 2.) Brad Holter .2858 (that ain't a bad "margin of victory" either), 3.) Bill Slocombe .3162. At 200 yards: 1.) Grant Schick .3794, 2.) Chuck Pond .3796, 3.) Al Hiebert .4010. Grand agg: 1.) Al Hiebert .3093, 2.) Chuck Pond .3580, 3.) Grant Schick .3582. The grand agg winner shot a 6PPC, Stolle action, Schneider barrel, Leupold 36X scope, 27.5 grains of H322 with 68 grain Stricker bullets. Simison was the gunsmith, and Sinclair the stocker.

Two gun aggregate: 1.) Grant Schick .3286, 2.) Al Hiebert .3493, 3.) Bernie Altenburg .3760, 4.) Chuck Pond .3918, 5.) Murray Benson .4159.

WEIKERT

There were 37 shooters at the Union County range on May 5th and 6th for the Nate Boop Memorial Shoot. Classes contested were the perennial favorites: light varmint and heavy varmint.

In the light varmint class, Jeffrey Cowles got out in front of the pack with a 100 yard win, and then passed from the sight of mortal man at 200 yards . . . an experience not unknown to many of us . . . if indeed not all of us. It's a hard, cold world out there, Jeffrey, my lad. At 100 yards: 1.) Jeffrey Cowles .2238 (for one brief, shining moment . . . there was Camelot), 2.) Richard Lockwood .2388 (hmm . . . now that I look at the results . . . we lost Richard at 200 yards as well . . .), 3.) Ted Parrelo .2546 (hmm . . . now that I look at the results . . . there's another one that we lost at 200 yards. Good gravy, the carnage must have been terrible at that distance!), 4.) Jeff Ely .2576, 5.) Bob White .2740. At 200 yards (stick around for a completely different cast of characters here): 1.) Bill Brawand .3130, 2.) Dennis Collins .3421, 3.) Barry Devliegher .3550, 4.) Russ Boop .3608, 5.) Jim Oliver .3831. In the grand agg the relatively steady shooting of Jeff Ely (4th at 100, 6th at 200) was to give him the win for the class: 1.) Jeff Ely .3220, 2.) Bill Brawand .3302, 3.) Russ Boop .3308, 4.) Barry Devliegher .3321, 5.) Michael Barlow .3412. The agg winner shot a 6PPC, CPS action, Hart barrel, Leupold 36X scope, 28.0 grains of GI 322 with Rubright bullets, in a rifle smithed and stocked by Korzinek.

In the heavy varmint class we finally began to encounter a few signs of consistency . . . Bob White was to place in the top three at both yardages . . . and Bill Brawand was to continue with his mastery of the 200 yard distance, winning this class as well at that yardage (he had taken the light varmint yardage win earlier). At 100 yards: 1.) Bob White .2496, 2.) Howard Levy .2516, 3.) Carl Lynn .2650, 4.) Joe Davis .2668, 5.) Russ Boop .2708. At 200 yards: 1.) Bill Brawand .3329, 2.) Michael Barlow .3577, 3.) Bob White .3622, 4.) Ted Parrelo .3651, 5.) Brian Rubright .3792. Grand aggregate: 1.) Bob White .3059, 2.) Bill Brawand .3306, 3.) Michael Barlow .3373, 4.) Ted Parrelo .3430, 5.) Howard Levy .3511. Mr. White shot a 6PPC, CPS action, Schneider barrel, B&L 36X scope, 28.4 grains of H322 with Rubright bullets, in a gun smithed and stocked by himself.

Two gun aggregate: 1.) Bill Brawand .3304, 2.) Michael Barlow .3392, 3.) Ted Parrelo .3440, 4.) Russ Boop .3448, 5.) Bob White .3623, 6.) Barry Devliegher .3689, 7.) Brian Rubright .3728, 8.) Jim Oliver .3823, 9.) Richard Lockwood .3923, 10.) Jeff Ely .3966.

INTERNATIONAL BENCHREST SHOOTERS

IBS OFFICERS

PRESIDENT
James F. Borden
R.D. #1 Box 244A
Tunkhannock, Pa. 18657
Phone: (717) 833-2234

VICE PRESIDENT and
MATCH SCHEDULE CHMN.
Jim Oliver
10161 Jay Knapp Road
Dansville, New York 14437
Phone: (716) 335-5617

2nd VICE PRESIDENT
Paul Ryan
1005 Pheasant Run Rd. - RD #1
Clarks Summitt, Pa. 18411

TREASURER
Brian Rubright
1008 S. Quince Rd.
Walnutport, Pa.
Phone: (215) 767-1339

SECRETARY
RUSS BOOP
RD #2, BOX 78
MIFFLINBURG, PA. 17844

RECORDING SECRETARY
Joan Borden
R.D. #1 Box 244A
Tunkhannock, Pa. 18657
Phone: (717) 833-2234

PAST PRESIDENT
Robert A. White
8 New Jersey Avenue
Lake Hopatcong, NJ 07849
Phone: (201) 663-5159 (home)

IBS EDITOR
David D. Brennan
37 Burnham Street
East Hartford, Conn. 06108
Phone: Work (203) 643-1157

TARGETS

Target No.	Target Description	Quantity	Total Weight	List Price per 100
IBS-B/1	100 YD Benchrest—Black 8x15½	500	15	7.00
IBS-B/2	200 YD Benchrest—Black 8x16½	500	15	7.00
IBS-B/3	300 YD Benchrest—Red 12x23½	250	19	21.50
IBS-H/1	100 YD Hunter—Black 12x19	250	14	10.50
IBS-H/2	200 YD Hunter—Black 13x21	250	15	10.50
IBS-H/3	300 YD Hunter—Red 13x26	250	22	25.50

Prices are PER HUNDRED TARGETS
Add Freight from table below

* **SHIPPING/HANDLING**—CONTINENTAL USA ONLY

UPS Ground	Up to 10 lbs	Up to 24 lbs.	24-49 lbs.	50-74 lbs.	75-99 lbs.	100-149 lbs.	150-199 lbs.	200 lbs. & over	C.O.D. ADD
ADD	$4.00	$7.00	$12.50	$16.50	$24.50	$40.00	$56.50	Truck Rates	$3.50

Determine shipping/handling price by totaling catalog weights per item.

Order Targets in carton lots only

DUNHAM'S BAY

A heavy bench, light varmint and heavy varmint class match at The Bay on July 14th and 15th.

In the heavy bench class . . . where tortured, troubled souls . . . "leading lives of quiet desperation," as Thoreau phrased it, so very well . . . voluntarily elect to fire ten shot groups. . . . "It feels so good when you stop" . . . fourteen shooters entered . . . mostly under assumed names. At 100 yards: 1.) Bill Niemi .2398, 2.) Jim Greer .2740, 3.) Bud Welsh .2894. At 200 yards: 1.) Allie Euber .3555, 2.) Seely Masker .4643 (yes, Emma, that's a blowout win all right, you're perfectly correct in your opinion here), 3.) Jerry Masker .4994 (we note with interest that the old man continues to push the kid around; publicly, at least). Grand aggregate: 1.) Allie Euber .3243, 2.) Bill Niemi .3710, 3.) Jim Greer .3875.

In light varmint class, where more logical shooters (forgive the oxymoron) elect the fire five shot groups (albeit with lighter rifles that tend to punish the unwary), there were twenty-seven shooters on line . . . including, of all people, Joe Vinci, who has apparently returned from voluntary exile on Elba (again). We can't tell you Joe won the whole thing. . . this is a match report, not Rocky XV. Rather it was to be Jack Sutton's day . . . although Norm Dixon made him work for it. Rookie John Belden, firing in his first match ever, showed little respect for the Hall of Fame names all around him, placing a solid third overall (he did it the hard way . . . 19th at 100 yards, 1st at 200 yards). At 100 yards: 1.) Jack Sutton .2216, 2.) Norm Dixon .2218 (cut it a bit close, Mr. Sutton?) 3.) Bob White .2298. At 200 yads: 1.) John Belden .3018, 2.) Jack Sutton .3400, 3.) Norm Dixon .3552. Grand aggregate: 1.) Jack Sutton .2808, 2.) Norm Dixon .2885, 3.) John Belden .3370, 4.) Jim Greenawalt .3093 (yes, Emma, I know that there seems to be a waldog in the woodpile on the 3rd-4th place grand aggs, but we must work off the match report, we are told), 5.) Tom peria .3133. Mr. Sutton, in his victory, shot a 6mm Olewine, Hart action, Hart barrel, Leupold 36X scope, 27.5 grains of T322 with Rubright 65 grain bullets, and Federal primers. Gunsmithing and stocking were by the Hart Rifle Barrels Shop (anyone surprised?)

The heavy varmint class turned up 43 shooters; not bad at all. At 100 yards the Bay Club's "regular," Marty Caratsole, turned in a range agg of .2052, good enough to beat out Jack Sutton's .2092, and Tom Suack's .2112, respectively. In fourth place was John Hollister, with a .2304, and Jeanne Lynn took fifth place with a .2364. At 200 yards Jim Griffin took yardage honors with a .2372. He was followed in the breadline by: 2.) Jeanne Lynn .2469, 3.) Bob White .2626, 4.) Marty Caratsole .2630, 5.) John Hollister .2643. Grand agg: 1.) Marty Caratsole .2341, 2.) Jeanne Lynn .2417, 3.) John Hollister .2474, 4.) Jack Sutton .2545, 5.) Tm Suack .2623. Grand agg winner Marty Caratsole shot a 6PPC, Hall action, Hart barrel, Leupold 36X scope, 27.6 grains of H322 white Euber 68 grain flat base bullets and Federal primers. Bart Weider was gunsmith and stocker.

For the two gun light varmint-heavy varmint title it was: 1.) Jack Sutton .2677, 2.) Marty Caratsole .2952, 3.) John Hollister .3019. For the heavy bench-heavy varmint title we had: 1.) Allie Euber .2998, 2.) Dick Maretzo .3695, 3.) Jerry Masker .3981.

In his match bulletin, Charlie Fountaine wondered aloud about the ".240 FW" cartridge that was shot quite well by rookie John Belden, firing in his first match. Essentially the cartridge is the same as the "old" Sand-digger, a Dan Dowling creation . . . nowadays often called the .240 Firewalker. The PPC case, with a 40 degree shoulder, and 75 thousandths more body. These changes effectively give the current PPC-USA cases the same powder capacity as the older .220 Russian cases. (Thanks, Mr. Belden, for supplying the history here.)

DUNHAM'S BAY 1991 WINTER LEAGUE

The following match schedule is tentative, as this is written, pending approval of the IBS Match Coordinator (be assured that the customary bribes have already been offered; the customary threats will follow shortly hereafter). Just keep in mind, it's tentative at the moment. . . .

January 6
January 20
February 3
February 17
March 3
March 17
April 7
April 21
May 5 (Banquet Match)

MUNCY

A well-attended match on June 24th at the Sulphyr Springs club at Muncy, PA.

Hunter class (12 shooters): 1.) Vince Pastorella 249-11x, 2.) Frank McKee 248-13x, 3.) Alan Kogoy 248-9x, 4.) Guy Green 248-9x, 5.) Paul Huffman 246-10x.

Varmint hunter class (8 shooters): 1.) Gary Long 249-8x, 2.) Alan Kogoy 249-8x, 3.) Bill Creasy 248-10x, 4.) Al Weaver 247-9x.

Light varmint for score (18 shooters): 1.) Jeff Ely 250-14x, 2.) Ted Parreco 250-14x, 3.) Wayne Hill 250-14x, 4.) Douglas Rea 250-11x, 5.) Corey Frask 250-11x.

Heavy varmint for score (17 shooters): 1.) Rick Hileman 250-20x, 2.) George McCoy 3rd 250-18x, 3.) Carl Lynn 250-16x, 4.) John Stahl 250-16x, 5.) Robert McGuigan 250-15x.

BENCHREST VIDEO

NOW AVAILABLE

$24.95
plus $5.00

(Shipping and Handling)

$29.95
TOTAL

ORDER FROM

Joan Borden
R.D. #1, Box 244A
Tunkhannock, Pa. 18657

1990-1991 IBS SCORE SHOOTING SCHEDULE

Nov. 4 — SALISBURY GUN CLUB, Salisbury, Maryland — 100 Yards H-VH-VFS, 11 AM

1990-1991 IBS VARMINT SHOOTING SCHEDULE

Nov. 17 — FLORIDA BENCHREST SHOOTERS—HV & LV, 100 yards, 9 am

Jan. 19, 1991 — FLORIDA BENCHREST SHOOTERS — Florida Invitational — HV & LV, 100 yards, 9 am

Feb. 16-17, 1991 — FLORIDA BENCHREST SHOOTERS — Florida State Championships — Sat. 16th HV & LV 100 yards; Sun. 17th Hunter & Varmint for Score 100 yards

NOTE: PREREGISTRATION REQUIRED FOR FLORIDA MATCHES.

FLORIDA BENCHREST MATCHES

IMPORTANT ANNOUNCEMENT

Dear Dave,

After our telephone conversation a few days ago, I thought it best to drop you a few lines.

As you know we here in Florida are trying to get benchrest shooting on the move again. Our Florida State Championships back in January turned out pretty well. We had a good number of vacationing northerners show up, and we are hoping for the same this winter.

Our major problem is that we utilize a County Park range, and we *MUST* know how many competitors will be attending each scheduled contest. We had only six guns on the line for our August and September shoots. There were twenty positions that we reserved and paid for that went empty.

PREREGISTRATION IS AN ABSOLUTE MUST. We are not asking for any advance money, just a postcard or phone call expressing intent.

We realize that the summer conditions here are almost intolerable, the sun is just too damned hot. With all the shoots around the country, who in their right minds would travel to the southmost tip of the country to shoot. During the winter it is a whole new ballgame, those that spend their winters here know what I mean.

You should try sometime Dave, bring a tackdriver and PEN along. I will take the pictures and supply all the cold foamy stuff.

Regards to all my shooting pals up in the green rolling hills country.

Tony Hidalgo, Sec./Treas.
FBSA
12701 SW 9th Place
Davie, FL 33325
305-476-7645

LEETOWN

The June 10th match at Leetown was marked by virtually no competition in the hunter, and hunter-varmint classes (just one shooter in each), and a real brawl in varmint for score, where everyone of the nine competitors shot a "possible" 250.

The hunter class winner (and only entrant) was Eddie Warren, via a 225-1x. Ditto for Gary McPherson, with a 247-9x in the varmint-hunter class.

In varmint for score the top shooters were: 1.) Calvin Willard 250-22x (with a short-30 wildcat), 2.) Gene Thompson 250-16x, 3.) Eubert Burgess 250-13x, 4.) Mike McGee 250-13x, 5.) Milt Cook 250-12x.

GUTHSVILLE

Another well-attended score match; the July 1st match for the Guthsville Club (Orefield, PA) had 35 shooters for the varmint for score class!

Varmint hunter class (13 shooters): 1.) Frank McKee (6mm American) 250-15x, 2.) Ken Madeira 249-12x, 3.) Paul Creasy 249-7x, 4.) Tony Groff 247-7x, 5.) Bill Creasy 246-11x.

Hunter class (10 shooters): 1.) Chris Vingling 249-8x (6mm HLS), 2.) Alan Kogoy 248-13x, 3.) Guy Green 246-9x, 4.) Erwin Shinke 246-5x, 5.) Vince Pastorella 244-8x.

Varmint for score (35 shooters): 1.) Harold Hill Jr. (6PPC) 250-17x, 2.) Eugene Thompson 250-16x, 3.) Dale Madeira 250-15x, 4.) Craig Madeira 250-14x, 5.) Jeff Thompson 250-14x, 6.) Gino Sassani 250-14x, 7.) Ted Parreco 250-13x, 8.) Wayne Hill 250-12x, 9.) Bert Rypkema 250-12x, 10.) Joe Emanuele 250-12x.

GENESEE

Six shooters at the Genesee range for the July match. In the varming for score competition the top three shooters were: 1.) John Wagner 250-17x, 2.) Jim Stekl 250-14x, 3.) Jerry Klick. The winner shot a GBR, Stolle action, Hart barrel, Leupold-Premier 50X scope, 29.3 grains of T32 with Berger 68 grain bullets. Gunsmithing was by Dan Dowling, and stock work by Truman Wilson. In fourth place was a distinguished name . . . Art Blensinger . . . now 87 years young.

There were seven shooters for the June match at Genesee (hmmm . . . what month comes first, June or July? What the heck, they'll never notice). Harry Beaver set a new range record, with a nice 250-21x in the varmint for score competition. He was followed by John Wagner 250-13x, and Jerry Klick 249-9x. The record-breaking was accomplished with a 6PPC, Remington action, Hart barrel, Leupold 36X, 27.4 grains of H322 with 63 grain Cussins bullets. Gunsmith was R. Lockwood.

INTERNATIONAL BENCHREST SHOOTERS APPLICATION

NAME_____

ADDRESS _____

CITY_____ STATE_____ ZIP_____

( ) IBS Membership and Precision Shooting Magazine — $30/year

( ) Associate Membership — Must live in same household as a Regular Member— receives no magazine — $5.00/year

( ) Junior member — 17 and under — no magazine — $5.00/year

( ) Overseas Membership — Includes Precision Shooting Magazine $42.50 in US Funds for Surface Mail
$60.00 in US Funds for Air Mail

( ) Life Membership — includes Precision Shooting Magazine — $300.00 in US Funds

( ) Club Membership $30.00 for American Continents
$37.50 Overseas (US Funds only) (For Surface Mail)

MAIL MEMBERSHIPS TO: JOAN BORDEN, R.D. #1 Box 244A, Tunkhannock, Pa. 18657

Make checks payable to IBS.

Allow up to 60 days for first magazine to arrive.

AUGUSTA

The Capitol City Club, we note with interest, have had their June match results and their September match results published in these distinguished pages. Which is more than can be said for the results of their May match, and their two July matches. Why does the IBS editor do things like this? Answer: we have a long-range program underway to drive Joe Gilbert insane. Note how well we are doing. . . .

May 27th Hunter class, top three: 1.) Dan Caruso 250-14x, 2.) Ira Farnsworth 248-9x, 3.) Blaine Johnson 247-10x.

Varmint hunter, top three: 1.) Joe Gilbert 249-15x, 2.) Blaine Johnson 247-7X, 3.) Dan Caruso 246-9x.

Varmint for score, top three: 1.) Ira Farnsworth 250-9x, 2.) Dwight Furrow 249-14x, 3.) Blaine Johnson 249-13x.

July 1st: Hunter class, top three: 1.) Joe Gilbert 249-7x, 2.) Ira Farnsworth 247-9x, 3.) Dan Caruso 246-7x.

Varmint hunter, top three: 1.) Joe Gilbert 250-12x, 2.) Dan Caruso 249-11x, 3.) Blaine Johnson 248-11x.

Varmint for score, top three: 1.) Dwight Furrow 250-17x, 2.) Blaine Johnson 250-16x, 3.) Joe Gilbert 250-13x.

July 28-29 (Maine State Championships) Hunter class, 100 yards: 1.) Randy Fritz 250-13x, 2.) Dan Caruso 248-10x, 3.) Charlie Fontaine 248-9x. At 200 yards: 1.) Charlie Fountaine 236-2x, 2.) Randy Fritz 236-7x, 3.) Dan Caruso 234-2x. Grand agg: 1.) Randy Fritz 248-14, 2.) Charlie Fountaine 484-11x, 3.) Dan Caruso 482-12x.

Varmint-hunter class, 100 yards: 1.) Dwight Furrow 249-13x, 2.) Dan Caruso 249-12x, 3.) Joe Gilbert 249-7x. At 200 yards: 1.) Dan Caruso 245-3x, 2.) Gary Long 244-2x, 3.) Joe Gilbert 241-2x. Grand agg: 1.) Joe Gilbert 295-9x, 2.) Dan Caruso 494-15x, 3.) Gary Long 490-18x.

Varmint for score, 100 yards: 1.) Joe Gilbert 250-15x, 2.) Charlie Fountaine 250-15x, 3.) Blaine Johnson 250-14x. At 200 yards: 1.) Blaine Johnson 246-2x, 2.) Parker Hills 246-1x, 3.) Joe Gilbert 245-4x. Grand agg: 1.) Blaine Johnson 496-16x, 2.) Joe Gilbert 495-19x, 3.) Randy Fritz 495-11x.

MAINE STATE CHAMPIONSHIPS
Class winners—Joe Gilbert, varmint-hunter; Randy Fritz, hunter; Blaine Johnson, varmint for score.

Competitors at the 1990 Maine State Championships.

1990 STATE OF MAINE BENCH-REST SCORE CHAMPIONSHIPS

REG: I.B.S.--------CAPITOL CITY R&P CLUB AUGUSTA,MAINE-----JULY 28/29,1990

TOP 5 HUNTER RIFLES

R. FRITZ 30/30 722 LILJA WEAVER T6 FRITZ 37 T322 134 FRITZ 7½
C. Fountaine 6x44 700 HART " " MASKER 35 H4895 68 EUBER FB 7½
D. CARUSO 308 700 HART LEU 6X HART 41 H4895 168 SIERRA 210M
G. LONG 30x47 REM MacLENNON LEU 6X FRITZ 41.5 748 150 CHISM 210
P. HILLS 308 700 HART LEU 6X D. FURROW 39½ H4895 166 HILLS FB FED

TOP 5 VARMINT HUNTER RIFLES

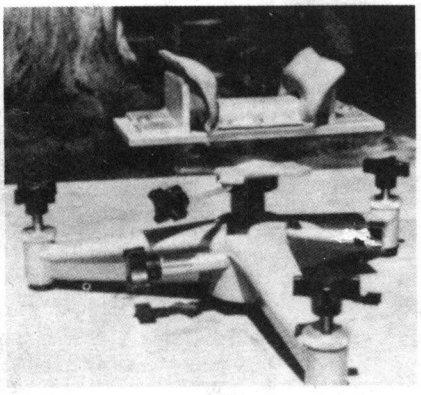
JOE GILBERT 6PPC 700 HART LYMAN 6X MASKER 28 H322 68 EUBER FB 205M
DAN CARUSO 6PPC 700 HART LEU 6X MASKER 28 H322 68 BERGER 205M
GARY LONG 6x45 REM LIJLA LEU 6X FRITZ 34.4 H4895 68 FRITZ 7½
D. FURROW 6PPC 788 HART WEV 6X FURROW 27½ H322 68 WATSON FED
C. FOUNTAINE 6x44 700 HART WEVER T6 MASKER 35 H4895 68 EUBER FB 7½

TOP 5 VARMINT FOR SCORE

B. JOHNSON 6PPC HART-1A HART LEU 36X MASKER 27.7 H322 68 BERGER 7½
J. GILBERT 6PPC 40X-SL HART LEU 36X MASKER 28 H322 68 EUBER 210M
R. FRITZ 6PPC CPS McLENNAN LEU 36X FRITZ 27.8 T322 62½ FRITZ F205
C. POIRIER 6PPC TROPHY KRIEGER B&L 36X BEAUDOIN 28 H322 68 HOLLISTER FB 7½
DONNA ERSKINE 6PPC 788 HART LEU 36X FURROW 27½ H322 68 WATSON FED

The new

Bald Eagle Front Rest



PATENT PENDING

$129.95

with the standard top plus shipping

VISA MasterCard

MATERIAL:
Aircraft Quality Aluminum

WEIGHT:
7 pounds 15 ounces (with bag)

FINISH:
Lifton clear coats

LESS $15 $20 UNTIL NOV. 31st

FEATURES:
— Rack and Pinion on primary rise
— Fourth leg

OPTIONS:
— Rifle Stop
— Deluxe top with stop
— Bag Available
— New, Windage Top Available

BALD EAGLE
PRECISION MACHINE CO.

101 Allison Street
Lock Haven, Pa. 17745
(717) 748-6772
FAX (717) 748-4443

BILL GEBHARDT
NRA Endowment Member/
IBS Life Member/NBRSA Annual Member

The Gun Protectors!

Shooter's Choice, the number one bore cleaner, is now joined by Quick Scrub and Rust Prevent. They are destined to become the number one cleaner/degreaser and number one rust preventer. These products were developed by long-time shooters to protect *their* guns; full money-back guarantee if these products don't satisfy *you*.

Send for FREE Brochure or Mail $2.00 (P&H) for FREE 1 oz. Sample of Bore Cleaner

SHOOTER'S CHOICE
Straight-Shootin' Gun Care!

16770 Hilltop Park Place
Dept. 10PS
Chagrin Falls, Ohio 44022
(216) 543-8808

BOB PEASE ACCURACY

P.O. Box 310787-S -o O o- (AC 512) 625-1342
NEW BRAUNFELS, TEXAS 78131-0787

BENCHREST EQUIPMENT & SUPPLIES

Adjustable Torque Wrench
Belding & Mull 42″SS rods
Benchrest Scopes and Mounts
B-Square rifle Rests & Arbors
Cauterucio GTB Benchrest Bullets
Corbin Cleaners, Laps and Lubes
Davidson Vise, Ramps & Shrouds
Devcon Bedding Kits & Hex Bolts
Federal Match Primers & Cases
Hart Rifle Rest & Cotton Patches
Jones PA Dies, Bushings & DeCap Tool
Kleinendorst Expandiron & Bolt Tools
Marquart Precision Neck Turning Tool
Redding Benchrest Micrometer Measure
Shilen 1-3 lb. & 2-6 ounce Triggers
Shooter's Choice Cleaner & Grease
Sinclair Rod Guides and Clean Kit
Tuller Glove Leather Smooth BR bags
Whitetail Pocket Reamer & Head Cutter
Wilson Seater, Sizer, Gages & Trimmer

NO Overseas Foreign Orders Just U.S. 50 states & Canada

NEW
BPA Volume IV
Data & trends
Add this one to your set

The Bob Pease Collections; spiral bound booklets on accuracy.
Vol. I $6.00 Vol. II $6.00 Vol. III $6.00 Vol. IV $6.00 + $1 ea. postg.
(all four for $27.00 prepaid FIRST CLASS MAIL)

Send $1.00 for 16 pages of brochure, prices, news & updates.

MON - TUE - FRI - SAT AFTERNOONS BEST TO PHONE